



March 2002

**PHASE I ENVIRONMENTAL SITE
ASSESSMENT REPORT**

**Karwick Road Landfill Site
Karwick Road
Michigan City, Indiana**

Prepared For:

Michigan City Parks and Recreation Department
100 East Michigan Boulevard
Michigan City, Indiana 46360

Prepared By:

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Project No. 312-01

Advanced Pollution Technologists

• Environmental Consultants •

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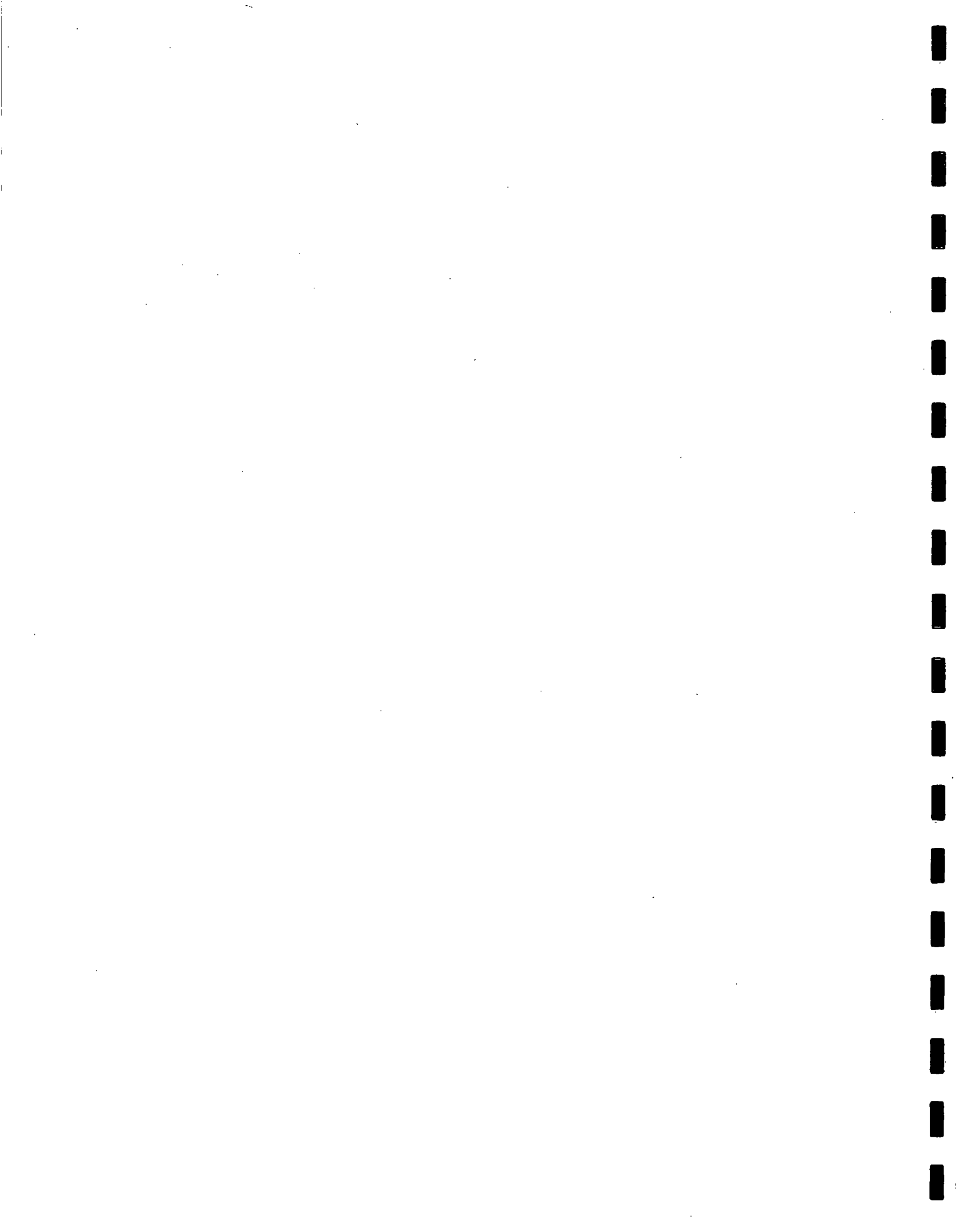
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- Figure 1 Site Location Map
Figure 2 Site Map

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1.0 SUMMARY

APT, Limited (APT) was retained by the Michigan City Parks and Recreation Department (MCPRD) to perform a Phase I Environmental Site Assessment (ESA) of the Karwick Road Landfill Facility located on Karwick Road near the intersection of Warnke Road in Michigan City, Indiana (Figure 1). The site consists of approximately 23.5 acres, contains no buildings or structures, and is largely overgrown with weeds and small trees. The purpose of the Phase I ESA was to identify any recognized environmental conditions (RECs) associated with the subject property that pose potential environmental liability. The Phase I ESA consisted of a site reconnaissance, a visual survey of adjacent properties, and an evaluation of local geologic and hydrogeologic conditions. APT also reviewed available historical fire insurance maps, historical topographic maps, aerial photographs, and federal and state environmental agency database records as part of the Phase I ESA.

The subject property is relatively hilly. The grounds are mostly brush covered and the western portions are wooded. Two-track service roads run throughout the site. The property is bounded on the north and south by rail lines, on the east by Karwick Road, and on the west by a creek.

Based on the results of the Phase I ESA, the following RECs were identified at the subject property:

- REC-1: Buried Waste – The entire site was used as a municipal landfill. There is no available history of the types of waste accepted at the landfill. Information received from Michigan City personnel indicate that the landfill was used primarily to dispose of household waste. However, partially buried drums observed at the time of the site walk-through indicate that all types of waste may have been received at the facility. Therefore, the buried waste represents an REC.
- REC-2: Site-Wide Groundwater Issues – Due to the dates of operations at the facility and lack of information regarding management practices, the possibility of buried chemicals and the resulting leachate which may have affected the groundwater quality at the facility cannot be mitigated. Therefore site-wide groundwater represents an REC.

2.0 INTRODUCTION

This section includes the purpose, scope of services, significant assumptions, limitations and exceptions, special terms and conditions, and user reliance for this Phase I ESA.

2.1 PURPOSE

The purpose of the Phase I ESA is to provide an objective, independent, professional opinion of any potential recognized environmental conditions (RECs) associated with the subject property. An REC is defined by the American Society of Testing Materials (ASTM) E1527-00 as:

"the presence or the likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on a property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

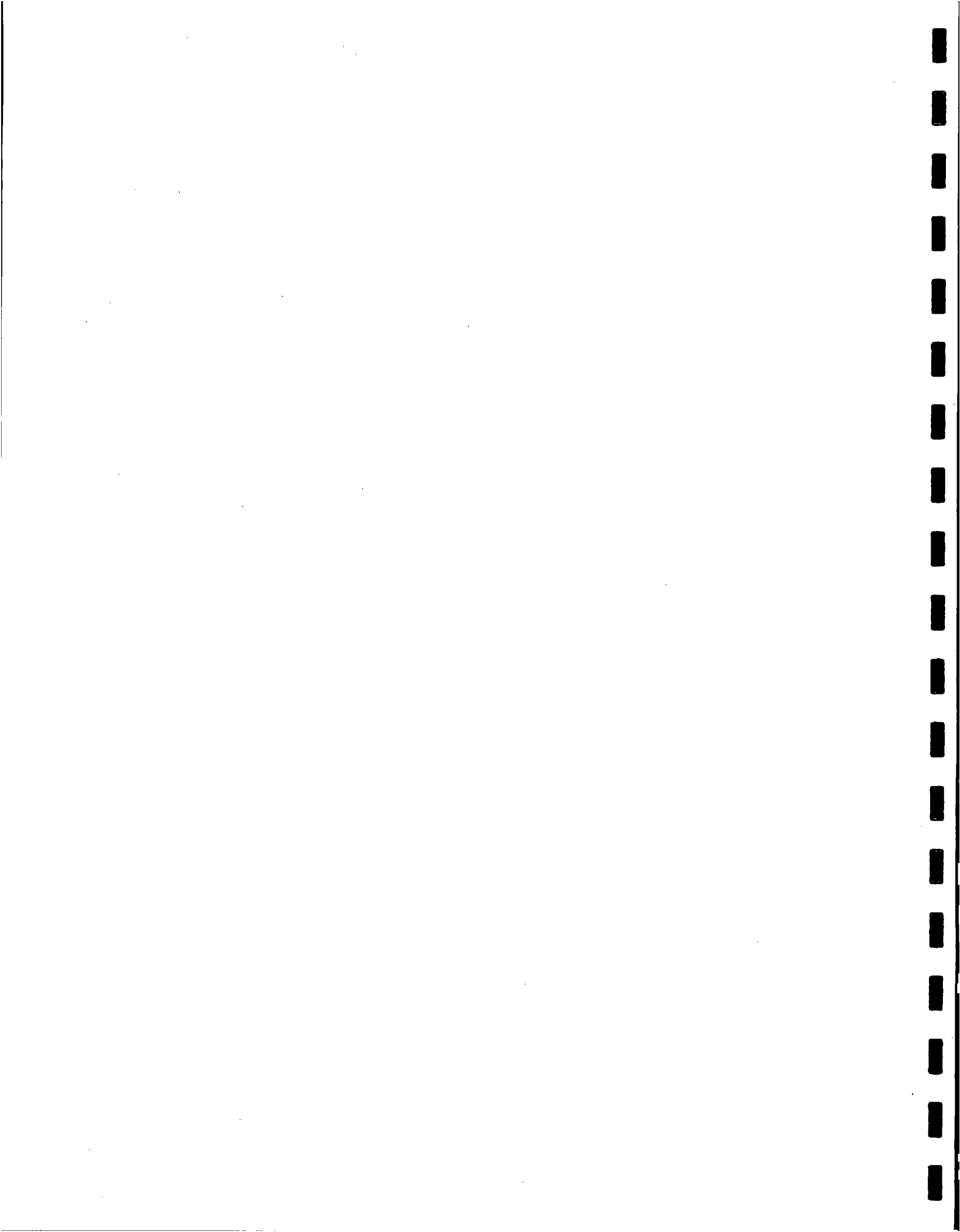
2.2 SCOPE OF SERVICES

APT was retained by MCPRD for the purpose of conducting a Phase I ESA of the Karwick Road Landfill facility located on Karwick Road near the intersection of Warnke Road in Michigan City, Indiana. APT performed the Phase I ESA in general accordance with the ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527-00)*.

The Phase I ESA consisted of the following scope items:

- A site reconnaissance by an environmental professional for the purpose of observing site conditions associated with the property, including:
 - Exterior observations of the periphery of the property and conditions and use across the property.
 - Interior observations within structures for indications of current and past usage.
 - A visual survey of site use for immediately adjoining properties
- An interview with the Owner Representative for the purpose of identifying current and past uses and conditions of the property, including:
 - Any known environmental condition that may result in a REC.
 - Any environmental regulatory compliance issue that may result in a REC.
 - A description of current and past operations on the property.
- A review of readily available regional and site-specific geologic and hydrogeologic conditions.





- Review of reasonably ascertainable information from standard sources regarding federal and state environmental agency database records, physical setting and historic use. The records review includes:
 - A review of readily available site historical records,
 - Previous environmental reports,
 - Waste disposal manifests,
 - Facility operating and discharge permits,
 - Historical aerial photographs,
 - Historical fire insurance maps,
 - Regional topographic and geologic maps, and
 - Federal and state environmental agency databases are reviewed to identify any adjacent or nearby properties that may impact the subject property.

The information was reviewed to identify potential RECs from current and former site operations, raw material storage and waste management practices, and/or past spill or leak incidents.

2.3 SIGNIFICANT ASSUMPTIONS

In preparing this report, APT has accepted as true and complete the information provided by the property owner's representative and standard sources of environmental records. APT has performed these services in a competent and professional manner in accordance with sound consulting practices and procedures. APT cannot warrant the actual site conditions described in this report beyond matters amenable to visual confirmation within the limits of this site reconnaissance program.

2.4 LIMITATIONS AND EXCEPTIONS

The Phase I ESA described herein was performed in general accordance with the currently acceptable engineering practices and principles found in the ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (E1527-00)*. Any variances from the ASTM standard are documented within the body of the report. The limits and exceptions defined in the ASTM E1527-00 standard are applicable to this assessment.

The evaluations and recommendations presented in this Phase I ESA report are based exclusively on information provided by the current property owner, available public records, and observations made during the site reconnaissance. No quantitative soil, groundwater, surface water, or air sampling was performed as part of the Phase I ESA. In addition, this Phase I ESA does not include:

- A certified asbestos inspection,
- Review of regulatory compliance issues,
- Radon evaluation,
- Lead-based paint evaluation,
- Wetlands survey,
- Identification of cultural and historic resources,



- Industrial hygiene evaluation,
- Identification of ecological resources,
- Identification of endangered species,
- Indoor air quality evaluation, nor
- High voltage power line evaluation.

2.5 SPECIAL TERMS AND CONDITIONS

There are no special terms or conditions applicable to this Phase I ESA.

2.6 USER RELIANCE

This Phase I ESA may be used and relied upon by the City of Michigan City. No other party may use or rely upon this Phase I ESA without the prior written consent of APT.



3.0 SITE DESCRIPTION

APT conducted a review of the physical setting, local utilities, surrounding land use, regional geological setting, and site history of the subject property. APT obtained the information presented in this section from observations made during the site reconnaissance, information provided during the historical interviews, and from published information and public records.

3.1 LOCATION AND LEGAL DESCRIPTION

The subject property is located on Karwick Road near the intersection of Warnke Road in Michigan City, Indiana (Figure 1) and consists of approximately 23.5 acres, contains no buildings or structures, and is largely overgrown with weeds and small trees. A legal description of the subject property was not provided by MCEDC.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

Based on a review of the United States Geological Survey (USGS) 7.5 Minute Topographic Map, Michigan City West, East Quadrangle (Figure 1), the general topography of the subject property is essentially flat with a gentle surface slope toward Trail Creek. The approximate surface elevation is 620 feet above mean sea level (ft msl).

At the time of the site reconnaissance, the property was overgrown and no buildings were observed. The westernmost portion of the property is heavily wooded. Two-track service roads run throughout the property.

3.3 CURRENT USE OF PROPERTY

The property is not currently being used.

3.4 DESCRIPTION OF STRUCTURES, ROADS, OTHER IMPROVEMENTS ON THE SITE

The site consists of approximately 23.5 acres, contains no buildings or structures, and is largely overgrown with weeds and small trees. Trail Creek forms the western property boundary along the northern portion of the property and bisects the southern portion of the property. The areas immediately surrounding the creek and west of the creek are heavily wooded. Dirt trails run throughout the eastern portion of the site.

Electric power, natural gas, city water, and sanitary sewer services do not currently service the property. According to city officials, no buildings have ever been present at the property and no utilities have ever been provided.

3.5 CURRENT USES OF ADJOINING PROPERTY

The subject facility is located in a predominantly rural/residential area in Michigan City, LaPorte County, Indiana. The property located immediately east of the facility is undeveloped and heavily wooded. Rail lines border the property to the north and south. An electrical substation is located northeast of the property, along the Chicago-South Shore rail line. The southeastern portion of the property is bordered by a Northern Indiana Public Service Company right-of-way.



A high-pressure gas line runs through the right-of-way to a transfer station located along the eastern side of Karwick Road. Residential properties are located south of the subject property beyond the C.S.X. rail line. The properties north of the South Shore rail line and west of the subject property are undeveloped wooded lots.

4.0 USER PROVIDED INFORMATION

The following summarizes the user provided information.

4.1 TITLE RECORDS

No title information was provided to APT by MCPRD.

4.2 OTHER

Discussions with the Michigan City Engineer, Mr. Bill Phelps, indicate that the property has been owned by the city of Michigan City since the area was annexed in 1960. Prior to 1960, the Town of Lakeland owned the landfill. According to city officials, wastes accepted at the landfill were predominantly household wastes.

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5.0 RECORDS REVIEW

This section summarizes the environmental database search and historical use information regarding the subject property.

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

An environmental records search was conducted for nearby properties, in accordance with ASTM guidelines, to identify any adjacent properties that may represent a recognized environmental condition to the subject property. Nearby properties that may represent a potential recognized environmental condition are those sites located hydraulically upgradient of the subject property (groundwater in this area typically flows northwest toward Lake Michigan) where releases or potential releases of hazardous or petroleum substances have occurred.

The reason for interest regarding potential off-site environmental concerns is that releases at hydraulically-upgradient sites may produce environmental impacts that can then potentially impact the subject property via surface runoff and/or groundwater flow. Environmental Data Resources, Inc. (EDR) of South Port, Connecticut conducted the environmental agency database search. The following summarizes the results of EDR report number 738374.3s for the subject property:

Federal/State Databases	Radius (Miles)	Mappable Sites
NPL	1.00	0
CERCLIS	0.50	0
CERCLIS – NFRAP	0.25	0
CORRACTS	1.00	1
RCRIS – TSD	0.50	0
RCRIS – Lg. Quan. Gen.	0.25	0
RCRIS – Sm. Quan. Gen.	0.25	0
ERNS	TP	0
State Haz. Waste	1.00	0
State Landfill	0.50	0
LUST	0.50	0
UST	0.25	0
VCP	1.00	1
CONSENT	1.00	0
ROD	1.00	0
Delisted NPL	1.00	0
FINDS	TP	0
HMIRS	TP	0
MLTS	TP	0
MINES	0.25	0

Federal/State Databases	Radius (Miles)	Mappable Sites
NPL Liens	TP	0
PADS	TP	0
RAATS	TP	0
TRIS	TP	0
TSCA	TP	0
FTTS	TP	0
IN Spills	TP	0

A copy of the EDR report is provided in Appendix A. Details concerning the database searches for the sites and definitions of the terms included in the above table are included in Appendix A. EDR also searched several federal and state regulatory agency databases that are not required by the ASTM standard. Information on these databases is included in the report. The subject property was listed as an unmappable site in Comprehensive Environmental Response, Compensation, and Liability Information System No Further Remedial Action Planned (CERCLIS-NFRAP) database. A Freedom of Information Act (FOIA) request was submitted to the U.S. Environmental Protection Agency (USEPA) Region 5, the Preliminary Assessment Report is included as Appendix B. A FOIA request has been submitted to the Indiana Department of Environmental Protection (IDEM) but no documents have been sent to APT at the time of this report. Any information associated with this FOIA that becomes available in the future will be summarized and submitted under separate cover as an attachment to this report.

As stated previously, the primary concern with off-site contamination is the migration of constituents from a hydraulically upgradient source onto the subject property. Thus, attention is focused on releases at properties located hydraulically upgradient (i.e., southeast) of the subject property, and also those located adjacent to the subject property due to the fact that they share common property boundaries. The results of the EDR database search did not indicate that there were any properties located adjacent or hydraulically upgradient of the Karwick Road Landfill that pose a known environmental threat to conditions at the subject property.

The only other sites listed in the database are Cooper Industries and Federal Mogul Corporation, both of which are located approximately 1 mile east of the facility. According to the EDR report, Cooper Industries was enrolled in the Indiana Voluntary Remediation Program (VRP) but withdrew. Information regarding the nature of the environmental issues at the facility was not listed in the EDR report. Federal Mogul Corporation was listed in the CORRACTS database (a list identifying hazardous waste handlers with RCRA corrective action activity). There were 21 reported violations at the facility, the most recent in 1996. Review of the EDR report indicates that groundwater impacts are present at the facility, however information regarding the nature and extent of contamination is not available. The database search did not list any dates of compliance for either facility. However, due to the distance from these facilities to the target property, it is unlikely that they would adversely impact the target property.

5.2 ENVIRONMENTAL COMPLIANCE ISSUES

Environmental compliance issues are outside the scope of work for this Phase I ESA; consequently, no discussions regarding environmental compliance issues were held.

5.3 PHYSICAL SETTING SOURCES

Based on a review of the United States Geological Survey (USGS) 7.5 Minute Topographic Map, Michigan City West, Indiana Quadrangle (Figure 1), the general topography of the subject property is essentially flat with a gentle surface slope toward the south. There are no features that would indicate that off-site releases would be transported onto the property via surface run on.

Additionally, the topographic map review did not indicate the presence of pits, ponds or lagoons associated with on site waste disposal practices, nor are there elevation changes depicted on the map that would suggest dumping or burial of wastes.

5.4 HISTORICAL USE INFORMATION ON THE PROPERTY

A review of the available environmental reports was conducted to determine the site history and prior operations on the site. Individuals formerly involved in the day-to-day operation of the facility were not available for interview for this report.

A historical records review was also conducted for the site. Sanborn fire insurance maps were requested for the facility, but were not available. Similarly, historical aerial photographs were not available for review.

Two historical topographic maps were available for review, 1958 and 1980 (photorevised from the 1969 version). Both topographic maps depict similar surface elevations at the facility. The 1958 map shows the entire property as being heavily vegetated, while the 1980 only shows heavy vegetation west of Trail Creek. The only other difference between the topographic maps is the location of Cheney Run. In the 1958 map, Cheney Run joins Trail Creek at the northern property boundary, near the Chicago South Shore rail line. The 1980 topographic map depicts both this junction and a larger junction towards the center of the subject property.

6.0 SITE RECONNAISSANCE

The site reconnaissance was completed by Ms. Andrea DePoy of APT on March 18, 2002.

The purpose of the site reconnaissance and historical interview was to identify RECs related to the subject property. The primary focus of the site reconnaissance and interviews was to identify whether any of the following were historically or are currently present at the subject property:

- Hazardous/toxic substances or waste;
- Underground or aboveground tanks used for chemical or petroleum products;
- Drywells and leach fields;
- Signs of illegal dumping;
- PCB containing equipment; and
- Areas of stained soil and/or stressed vegetation.

Results of the site reconnaissance are limited to visual observations of those areas readily and reasonably observable.

6.1 METHODOLOGY AND LIMITING CONDITIONS

Andrea DePoy of APT conducted the site reconnaissance on March 18, 2002. Ms. DePoy, accompanied by Mr. Alex Bishop of APT walked the property to assess current site conditions.

6.2 GENERAL SITE SETTING

At the time of the site reconnaissance, the subject property was no longer being used. The site consists of approximately 23.5 acres, contains no buildings or structures, and is largely overgrown with weeds and small trees. Dirt trails run throughout the portion of the property east of Trail Creek. However, the entrance to the facility has been barricaded to prevent vehicle access.

6.3 EXTERIOR OBSERVATIONS

The southwest portion of the subject property, west of Trail Creek and south of Cheney Run, is relatively flat and heavily wooded. The general surface elevation is approximately five to ten feet above the surface of the creek.

East of Trail Creek, the subject property is relatively hilly. The general surface elevation of the eastern portion of the property is approximately 20 feet above the surface of Trail Creek. The eastern portion of the property is heavily wooded along the creek bank and the remainder of the property is overgrown with weeds and saplings. Two-track dirt trails run throughout the eastern portion of the property. The entrance to the property is currently barricaded with large concrete barriers.

Discarded construction debris, such as concrete, asphalt, and plastic piping were observed throughout the eastern portion of the property. Near the Trail Creek, more refuse was visible,



including typical household waste, larger items such as hot water heaters and mattresses, and several partially buried 55-gallon drums. Some of this debris is exposed on the east banks of Trail Creek

6.4 INTERIOR OBSERVATIONS

No buildings were present at the facility.

7.0 INTERVIEW WITH OWNER

As discussed previously, the operator of the Karwick Road Landfill facility was not available for interview at the time of the Phase I ESA. Furthermore, APT could not locate employees of the facility who would have knowledge of operations.

Discussions with the Michigan City Engineer, Mr. Bill Phelps, indicate that the property has been owned by the city of Michigan City since the area was annexed in 1960. Prior to 1960, the Town of Lakeland owned the landfill. According to city officials, wastes accepted at the landfill were predominantly household wastes.



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8.0 FINDINGS

This section summarizes known or suspected environmental conditions associated with the property. This portion of the report includes both RECs and de minimis conditions. The following RECs were identified at the subject property:

- REC-1: Buried Waste – The entire site was used as a municipal landfill. There is no available history of the types of waste accepted at the landfill. Information received from Michigan City personnel indicate that the landfill was used primarily to dispose of household waste. However, partially buried drums observed at the time of the site walk-through indicate that all types of waste may have been received at the facility. Therefore, the buried waste represents an REC.
- REC-2: Site-Wide Groundwater Issues – Due to the dates of operations at the facility and lack of information regarding management practices, the possibility of buried chemicals and the resulting leachate, which may have affected the groundwater quality at the facility, cannot be mitigated. Therefore site-wide groundwater represents an REC.

9.0 OPINION

This section of the report includes the environmental professional's opinion as to the potential impact on the property of the known or suspected environmental conditions identified. This section is to provide the reasoning or rationale in defining the potential environmental liabilities associated with the results of the Phase I ESA.

The only identified RECs at the subject property are the buried waste and the site-wide groundwater issues. The entire site was used as a municipal landfill. There is no available history of the types of waste accepted at the landfill. Information received from Michigan City personnel indicate that the landfill was used primarily to dispose of household waste in the 1950-1960s. However, partially buried drums observed at the time of the site reconnaissance indicate that all types of waste may have been received at the facility. Therefore, the buried waste represents an REC.

Due to the dates of operations at the facility and lack of information regarding management practices, the possibility of buried chemicals and the resulting leachate, which may have affected the groundwater quality at the facility, cannot be mitigated. Therefore site-wide groundwater represents an REC.



10.0 CONCLUSIONS

APT has performed this Phase I ESA in conformance with the scope and limitations of ASTM Standard E 1527-00 of a former municipal landfill located on Karwick Road in Michigan City, LaPorte County, Indiana. This assessment has revealed no evidence of RECs in connection with the property, except for the following:

- REC-1: Buried Waste – The entire site was used as a municipal landfill. There is no available history of the types of waste accepted at the landfill. Information received from Michigan City personnel indicate that the landfill was used primarily to dispose of household waste. However, partially buried drums observed at the time of the site walk-through indicate that all types of waste may have been received at the facility. Therefore, the buried waste represents an REC.
- REC-2: Site-Wide Groundwater Issues – Due to the dates of operations at the facility and lack of information regarding management practices, the possibility of buried chemicals and the resulting leachate, which may have affected the groundwater quality at the facility, cannot be mitigated. Therefore site-wide groundwater represents an REC.

11.0 DEVIATIONS

There have been no deviations from the practices defined in ASTM Standard E 1527.

12.0 ADDITIONAL SERVICES

There were no additional Scope of Service items contracted to be performed with this Phase I ESA.

13.0 REFERENCES

References used to perform this Phase I ESA are provided below.

USGS 7.5 Minute Topographic Maps – Michigan City East, Indiana, 1980

USGS 7.5 Minute Topographic Maps – Michigan City East, Indiana, 1958

14.0 SIGNATURE

The environmental professional responsible for this Phase I ESA was Ms. Andrea M. DePoy.



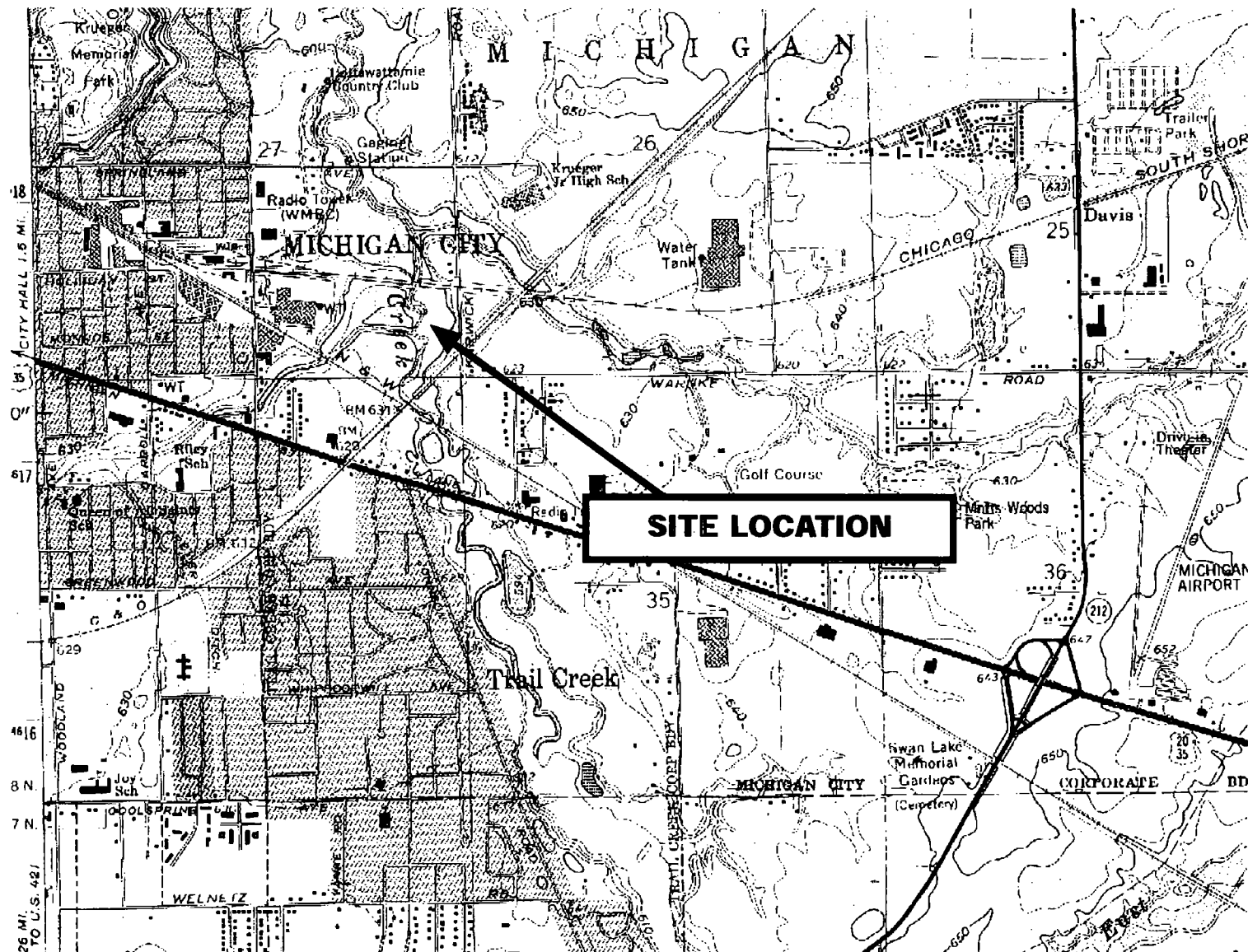
Andrea M. DePoy

15.0 QUALIFICATIONS

Ms. DePoy's resume is provided in Appendix C.

FIGURES





REFERENCE: USGS QUADRANGLE MICHIGAN CITY EAST 1969 (REV. 1980) LAPORTE COUNTY, INDIANA

APT

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TASK: 1

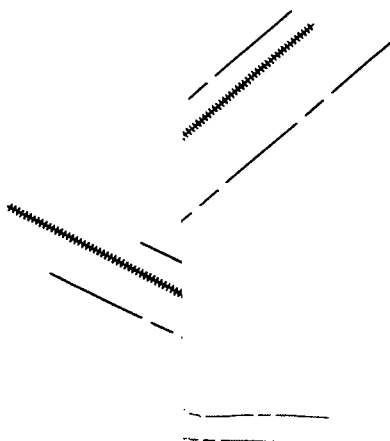
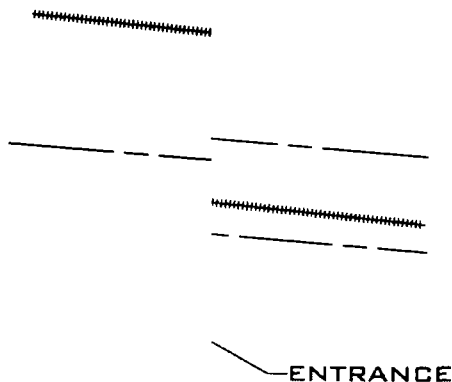
DWG: 312.1.F1.SL

Karwick Rd. Site
Michigan City, IN

PREPARED FOR
M.C. Parks & Recreation
Michigan City, IN

Figure 1

Site Location Map



REFERENCE: SOURCE DRAWING FROM GEOTECHNICAL EXPLORATION REP



	TASK 1	Kerwick Road Site Michigan City, IN	Figure 2
	DWG: 312.1.T3.MWBB		
	DATE: 1-29-02		
	DWG BY: AB	PREPARED FOR Michigan City Parks & Recreation Michigan City, Indiana	SITE MAP

APPENDIX A

Environmental Records Search Report

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The EDR Radius Map with GeoCheck®

**Michigan City-Karwick Rd Landfill Site
Karwick Road
Michigan City, IN 46360**

Inquiry Number: 738374.3s

February 25, 2002

The Source For Environmental Risk Management Data

**3530 Post Road
Southport, Connecticut 06490**

Nationwide Customer Service

**Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com**

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

KARWICK ROAD
MICHIGAN CITY, IN 46360

COORDINATES

Latitude (North): 41.710900 - 41° 42' 39.2"
Longitude (West): 86.856500 - 86° 51' 23.4"
Universal Transverse Mercator: Zone 16
UTM X (Meters): 511938.3
UTM Y (Meters): 4617475.5

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: 2441086-F7 MICHIGAN CITY EAST, IN
Source: USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
RCRIS-TSD..... Resource Conservation and Recovery Information System
RCRIS-LQG..... Resource Conservation and Recovery Information System
RCRIS-SQG..... Resource Conservation and Recovery Information System
ERNS..... Emergency Response Notification System

STATE ASTM STANDARD

SHWS..... List of Hazardous Waste Response Sites Scored Using the Indiana Scoring Model
SWF/LF..... Permitted Solid Waste Facilities
LUST..... Lust Leaking Underground Storage Tank List
UST..... Indiana Registered Underground Storage Tanks

FEDERAL ASTM SUPPLEMENTAL

CONSENT..... Superfund (CERCLA) Consent Decrees



EXECUTIVE SUMMARY

ROD.....	Records Of Decision
Delisted NPL.....	National Priority List Deletions
FINDS.....	Facility Index System/Facility Identification Initiative Program Summary Report
HMIRS.....	Hazardous Materials Information Reporting System
MLTS.....	Material Licensing Tracking System
MINES.....	Mines Master Index File
NPL Liens.....	Federal Superfund Liens
PADS.....	PCB Activity Database System
RAATS.....	RCRA Administrative Action Tracking System
TRIS.....	Toxic Chemical Release Inventory System
TSCA.....	Toxic Substances Control Act
FTTS.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

IN Spills..... Spills Incidents

EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas..... Former Manufactured Gas (Coal Gas) Sites

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS 1 degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the target property includes a tolerance of +/- 10 feet. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL ASTM STANDARD

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 11/14/2001 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
<i>FEDERAL MOGUL CORP</i>	<i>402 ROYAL RD</i>	<i>1/2 - 1 E</i>	<i>A2</i>	<i>5</i>

EXECUTIVE SUMMARY

STATE ASTM STANDARD

:Department of Environmental Management's current list of Voluntary Remediation Program sites that are no longer confidential.

A review of the VCP list, as provided by EDR, and dated 12/01/2001 has revealed that there is 1 VCP site within approximately 1 mile of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
COOPER INDUSTRIES/ANCO DIV	402 ROYAL RD.	1/2 - 1 E	A1	5

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name

NIPSCO MICHIGAN CITY GENERATING ST

MICHIGAN CITY DRUM SITE

TOWN OF PINES FLY ASH DUMP

KARWICK ROAD DUMP

MICHIGAN CITY PORT AUTHORITY

MICHIGAN CITY MARINA

MICHIGAN CITY GENERATING STATION

MICHIGAN CITY FIRE DEPARTMENT

PARTS CITY

Database(s)

FINDS, RCRIS-LQG, RCRIS-TSD,

CORRACTS, IN Spills

CERCLIS, FINDS

CERCLIS

CERC-NFRAP

LUST, UST

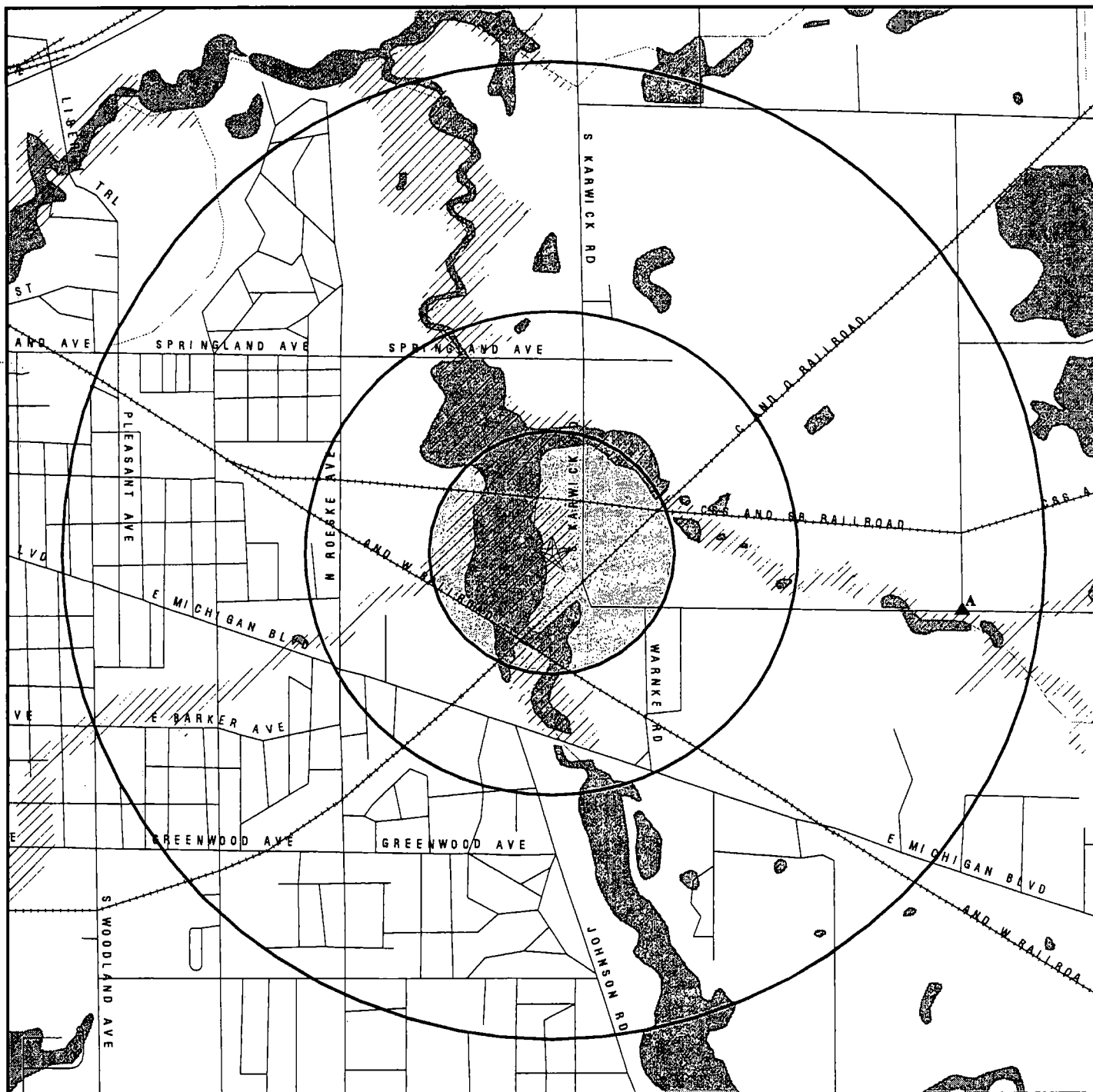
LUST, UST

UST, LUST

UST

FINDS, VCP

OVERVIEW MAP - 738374.3s - Advanced Pollution Tech.



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- ▨ National Priority List Sites
- ▨ Landfill Sites

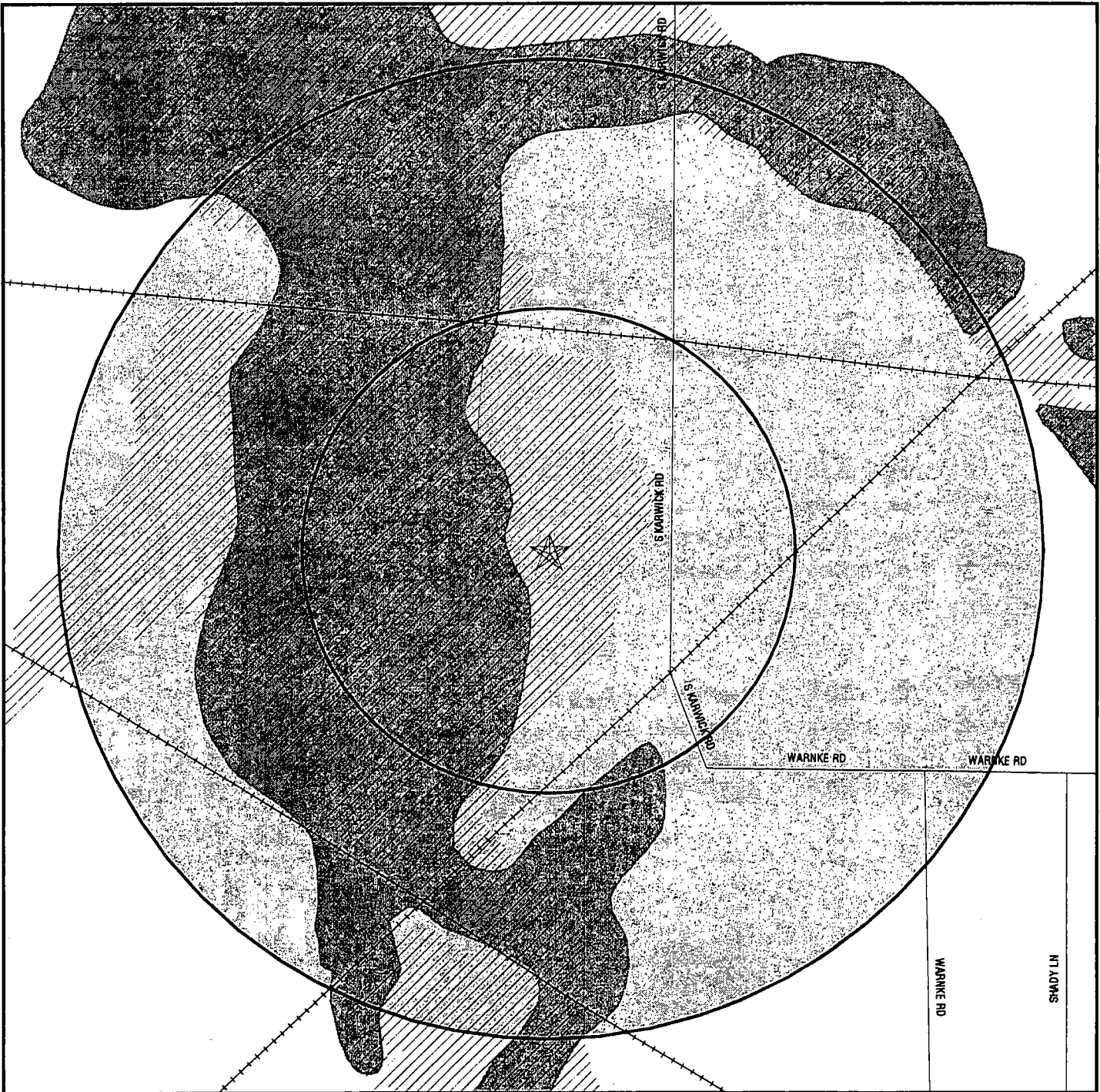
- ~ Power transmission lines
- ~ Oil & Gas pipelines
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- ▨ Wetlands

0 1/4 1/2 1 Miles

TARGET PROPERTY: Michigan City-Karwick Rd Landfill Site
ADDRESS: Karwick Road
CITY/STATE/ZIP: Michigan City IN 46360
LAT/LONG: 41.7109 / 86.8565

CUSTOMER: Advanced Pollution Tech.
CONTACT: Andrea DePoy
INQUIRY #: 738374.3s
DATE: February 25, 2002 1:39 pm

DETAIL MAP - 738374.3s - Advanced Pollution Tech.



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- ⚡ Sensitive Receptors
- ▨ National Priority List Sites
- ▨ Landfill Sites

- ⚡ Power transmission lines
- ⚡ Oil & Gas pipelines
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- ▨ Wetlands

TARGET PROPERTY: Michigan City-Karwick Rd Landfill Site
 ADDRESS: Karwick Road
 CITY/STATE/ZIP: Michigan City IN 46360
 LAT/LONG: 41.7109 / 86.8565

CUSTOMER: Advanced Pollution Tech.
 CONTACT: Andrea DePoy
 INQUIRY #: 738374.3s
 DATE: February 25, 2002 1:39 pm

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<u>FEDERAL ASTM STANDARD</u>								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.250	0	0	NR	NR	NR	0
CORRACTS		1.000	0	0	0	1	NR	1
RCRIS-TSD		0.500	0	0	0	NR	NR	0
RCRIS Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
<u>STATE ASTM STANDARD</u>								
State Haz. Waste		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	0	NR	NR	0
UST		0.250	0	0	NR	NR	NR	0
VCP		1.000	0	0	0	1	NR	1
<u>FEDERAL ASTM SUPPLEMENTAL</u>								
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
NPL Liens		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
<u>STATE OR LOCAL ASTM SUPPLEMENTAL</u>								
IN Spills		TP	NR	NR	NR	NR	NR	0
<u>EDR PROPRIETARY HISTORICAL DATABASES</u>								
Coal Gas		1.000	0	0	0	0	NR	0
AQUIFLOW - see EDR Physical Setting Source Addendum								

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s)
EDR ID Number
EPA ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

A1 COOPER INDUSTRIES/ANCO DIV
East 402 ROYAL RD.
1/2-1 MICHIGAN CITY, IN
4426
Higher Site 1 of 2 in cluster A

VCP S105202358
N/A

IN VCP:
VRP Id Number: 6931102
Applicant Name: Not reported
Project Manager: Not reported
Status: A site that voluntarily withdrawn from the VRP

A2 FEDERAL MOGUL CORP
East 402 ROYAL RD
1/2-1 MICHIGAN CITY, IN 46360
4426
Higher Site 2 of 2 in cluster A

RCRIS-LQG 1000218505
TRIS 46360THNDR40
RCRIS-TSD
CORRACTS
CERC-NFRAP

CERCLIS-NFRAP Classification Data:
Site Incident Category: Not reported Federal Facility: Not a Federal Facility
Non NPL Code: DR
Ownership Status: Other NPL Status: Not on the NPL
CERCLIS-NFRAP Assessment History:
Assessment: DISCOVERY Completed: 01/06/1987
Assessment: PRELIMINARY ASSESSMENT Completed: 06/08/1989
Assessment: SITE INSPECTION Completed: 09/01/1994
CERCLIS-NFRAP Alias Name(s):
INTERROYAL CORP
AMERICAN ROYAL INC.
THE ANDERSON COMPANY
INTER ROYAL

CORRACTS Data:
EPA Id: IND016520017
Region: 5
State: Not reported
Area Name: ENTIRE FACILITY
Original Scheduled Date: Not reported
New Scheduled Date: Not reported
Actual Date: 12/31/1986
Corrective Action: CA050 - RFA Completed
EPA Id: IND016520017
Region: 5
State: Not reported
Area Name: ENTIRE FACILITY
Original Scheduled Date: Not reported
New Scheduled Date: Not reported
Actual Date: 12/31/1986
Corrective Action: CA070NO - RFA Determination Of Need For An RFI, RFI is Not Necessary
EPA Id: IND016520017
Region: 5
State: Not reported
Area Name: ENTIRE FACILITY
Original Scheduled Date: Not reported
New Scheduled Date: Not reported
Actual Date: 03/28/1995
Corrective Action: CA070YE - RFA Determination Of Need For An RFI, RFI is Necessary

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

FEDERAL MOGUL CORP (Continued)

1000218505

EPA Id: IND016520017
Region: 5
State: Not reported
Area Name: ENTIRE FACILITY
Original Scheduled Date: Not reported
New Scheduled Date: Not reported
Actual Date: 09/27/1991
Corrective Action: CA075ME - CA Prioritization, Facility or area was assigned a medium corrective action priority

RCRIS:

Owner: FEDERAL MOGUL CORP
(248) 354-7700

Contact: EDWARD CZAJA
(219) 872-9411

Record Date: 04/07/1994

Classification: Large Quantity Generator, Small Quantity Generator, TSDF

Used Oil Recyc: No

TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated: Not reported
Area of Violation: TSD-Other Requirements
Date Violation Determined: 08/28/1989
Priority of Violation: Low
Schedule Date to Achieve Compliance: Not reported
Actual Date Achieved Compliance: 06/05/1991

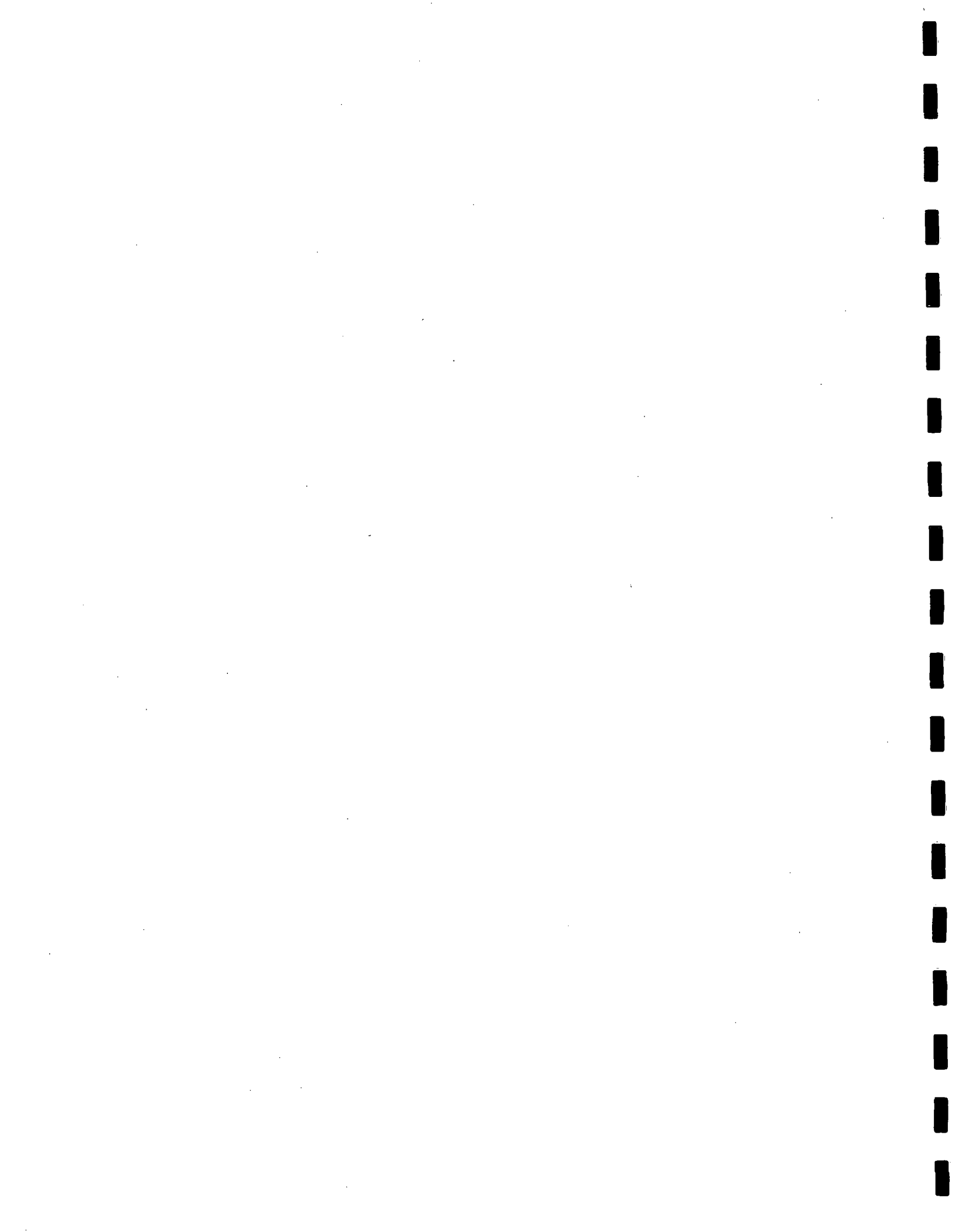
Regulation Violated: Not reported
Area of Violation: Generator-Land Ban Requirements
Date Violation Determined: 08/28/1989
Priority of Violation: Low
Schedule Date to Achieve Compliance: 12/16/1989
Actual Date Achieved Compliance: 01/16/1990

Enforcement Action: Written Informal
Enforcement Action Date: 11/16/1989
Proposed Monetary Penalty: Not reported
Final Monetary Penalty: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-Land Ban Requirements
Date Violation Determined: 08/28/1989
Priority of Violation: Low
Schedule Date to Achieve Compliance: 12/16/1989
Actual Date Achieved Compliance: 01/16/1990

Enforcement Action: Written Informal
Enforcement Action Date: 11/16/1989
Proposed Monetary Penalty: Not reported
Final Monetary Penalty: Not reported

Regulation Violated: Not reported
Area of Violation: Generator-Land Ban Requirements
Date Violation Determined: 07/22/1988
Priority of Violation: Low
Schedule Date to Achieve Compliance: 05/10/1989
Actual Date Achieved Compliance: 06/28/1989



Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

FEDERAL MOGUL CORP (Continued)

1000218505

Regulation Violated:	Not reported
Area of Violation:	TSD-Land Ban Requirements
Date Violation Determined:	07/22/1988
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	05/10/1989
Actual Date Achieved Compliance:	06/28/1989
Regulation Violated:	Not reported
Area of Violation:	TSD-Financial Responsibility Requirements
Date Violation Determined:	05/17/1990
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	Not reported
Actual Date Achieved Compliance:	12/11/1992
Enforcement Action:	Written Informal
Enforcement Action Date:	03/05/1991
Proposed Monetary Penalty:	Not reported
Final Monetary Penalty:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Other Requirements
Date Violation Determined:	05/24/1990
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	Not reported
Actual Date Achieved Compliance:	06/05/1991
Enforcement Action:	Written Informal
Enforcement Action Date:	07/05/1990
Proposed Monetary Penalty:	Not reported
Final Monetary Penalty:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Groundwater Monitoring Requirements
Date Violation Determined:	09/19/1990
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	Not reported
Actual Date Achieved Compliance:	06/29/1992
Enforcement Action:	Written Informal
Enforcement Action Date:	03/05/1991
Proposed Monetary Penalty:	Not reported
Final Monetary Penalty:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Groundwater Monitoring Requirements
Date Violation Determined:	10/16/1990
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	Not reported
Actual Date Achieved Compliance:	06/29/1992
Enforcement Action:	Written Informal
Enforcement Action Date:	10/01/1991
Proposed Monetary Penalty:	Not reported
Final Monetary Penalty:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Other Requirements
Date Violation Determined:	04/30/1991
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	Not reported
Actual Date Achieved Compliance:	06/29/1992

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

FEDERAL MOGUL CORP (Continued)

EDR ID Number
EPA ID Number

Database(s)

1000218505

Enforcement Action:	Written Informal
Enforcement Action Date:	10/01/1991
Proposed Monetary Penalty:	Not reported
Final Monetary Penalty:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Groundwater Monitoring Requirements
Date Violation Determined:	05/24/1984
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	Not reported
Actual Date Achieved Compliance:	10/17/1985
Enforcement Action:	Final Formal 3008(a) Compliance Order
Enforcement Action Date:	12/12/1984
Proposed Monetary Penalty:	Not reported
Final Monetary Penalty:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Financial Responsibility Requirements
Date Violation Determined:	06/27/1985
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	09/16/1985
Actual Date Achieved Compliance:	09/13/1985
Enforcement Action:	Written Informal
Enforcement Action Date:	08/19/1985
Proposed Monetary Penalty:	Not reported
Final Monetary Penalty:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Financial Responsibility Requirements
Date Violation Determined:	08/08/1985
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	Not reported
Actual Date Achieved Compliance:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Financial Responsibility Requirements
Date Violation Determined:	09/18/1985
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	11/04/1985
Actual Date Achieved Compliance:	12/12/1985
Enforcement Action:	Written Informal
Enforcement Action Date:	09/30/1985
Proposed Monetary Penalty:	Not reported
Final Monetary Penalty:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Groundwater Monitoring Requirements
Date Violation Determined:	08/27/1985
Priority of Violation:	Low
Schedule Date to Achieve Compliance:	10/17/1985
Actual Date Achieved Compliance:	Not reported
Enforcement Action:	Verbal Informal
Enforcement Action Date:	10/17/1985
Proposed Monetary Penalty:	Not reported
Final Monetary Penalty:	Not reported
Regulation Violated:	Not reported
Area of Violation:	TSD-Groundwater Monitoring Requirements

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

FEDERAL MOGUL CORP (Continued)

1000218505

Date Violation Determined: 05/27/1986
Priority of Violation: Low
Schedule Date to Achieve Compliance: 11/05/1987
Actual Date Achieved Compliance: 09/06/1990

Enforcement Action: Final Formal 3008(a) Compliance Order
Enforcement Action Date: 09/30/1987
Proposed Monetary Penalty: \$ 21,000.00
Final Monetary Penalty: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-Groundwater Monitoring Requirements
Date Violation Determined: 05/27/1986
Priority of Violation: Low
Schedule Date to Achieve Compliance: 11/05/1987
Actual Date Achieved Compliance: 09/06/1990

Enforcement Action: Final Formal 3008(a) Compliance Order
Enforcement Action Date: 09/30/1987
Proposed Monetary Penalty: \$ 21,000.00
Final Monetary Penalty: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-Financial Responsibility Requirements
Date Violation Determined: 10/20/1986
Priority of Violation: Low
Schedule Date to Achieve Compliance: 11/05/1988
Actual Date Achieved Compliance: 11/28/1986

Enforcement Action: Written Informal
Enforcement Action Date: 10/30/1986
Proposed Monetary Penalty: Not reported
Final Monetary Penalty: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-Financial Responsibility Requirements
Date Violation Determined: 03/03/1987
Priority of Violation: Low
Schedule Date to Achieve Compliance: 04/01/1987
Actual Date Achieved Compliance: 11/05/1988

Enforcement Action: Written Informal
Enforcement Action Date: 03/05/1987
Proposed Monetary Penalty: Not reported
Final Monetary Penalty: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-Other Requirements
Date Violation Determined: 08/06/1987
Priority of Violation: Low
Schedule Date to Achieve Compliance: 03/15/1988
Actual Date Achieved Compliance: 10/05/1988

Enforcement Action: Written Informal
Enforcement Action Date: 10/08/1987
Proposed Monetary Penalty: Not reported
Final Monetary Penalty: Not reported

Regulation Violated: Not reported
Area of Violation: TSD-Groundwater Monitoring Requirements
Date Violation Determined: 06/28/1995
Priority of Violation: Low

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

FEDERAL MOGUL CORP (Continued)

EDR ID Number
EPA ID Number

Database(s)

1000218505

Schedule Date to Achieve Compliance: Not reported
Actual Date Achieved Compliance: 10/07/1996
Enforcement Action: Written Informal
Enforcement Action Date: 09/13/1995
Proposed Monetary Penalty: Not reported
Final Monetary Penalty: Not reported

There are 21 violation record(s) reported at this site:

<u>Evaluation</u>	<u>Area of Violation</u>	<u>Date of Compliance</u>
Compliance Groundwater Monitoring Evaluation (CME)	TSD-Groundwater Monitoring Requirements	10/07/1996
Financial Record Review (FRR)	TSD-Financial Responsibility Requirements	12/11/1992
Compliance Evaluation Inspection (CEI)	TSD-Other Requirements	06/29/1992
Non-Financial Record Review	TSD-Groundwater Monitoring Requirements	06/29/1992
Operation and Maintenance Inspection (OAM)	TSD-Groundwater Monitoring Requirements	06/29/1992
Non-Financial Record Review	TSD-Other Requirements	06/05/1991
Financial Record Review (FRR)	TSD-Financial Responsibility Requirements	12/11/1992
Compliance Evaluation Inspection (CEI)	TSD-Other Requirements	06/05/1991
Other Evaluation	Generator-Land Ban Requirements	01/16/1990
	TSD-Land Ban Requirements	01/16/1990
Other Evaluation	Generator-Land Ban Requirements	06/28/1989
	TSD-Land Ban Requirements	06/28/1989
Compliance Groundwater Monitoring Evaluation (CME)	TSD-Groundwater Monitoring Requirements	09/06/1990
	TSD-Groundwater Monitoring Requirements	09/06/1990
Compliance Evaluation Inspection (CEI)	TSD-Other Requirements	10/05/1988
Compliance Schedule Evaluation (CSE)	TSD-Financial Responsibility Requirements	11/05/1988
Financial Record Review (FRR)	TSD-Financial Responsibility Requirements	11/28/1986
Other Evaluation	TSD-Groundwater Monitoring Requirements	09/06/1990
Compliance Groundwater Monitoring Evaluation (CME)	TSD-Groundwater Monitoring Requirements	09/06/1990
	TSD-Groundwater Monitoring Requirements	09/06/1990
Compliance Schedule Evaluation (CSE)	TSD-Financial Responsibility Requirements	12/12/1985
Compliance Schedule Evaluation (CSE)	TSD-Financial Responsibility Requirements	12/12/1985
Sampling Inspection	TSD-Groundwater Monitoring Requirements	09/13/1985
Compliance Schedule Evaluation (CSE)	TSD-Financial Responsibility Requirements	09/13/1985
	TSD-Financial Responsibility Requirements	09/13/1985
Sampling Inspection	TSD-Groundwater Monitoring Requirements	10/17/1985
Compliance Groundwater Monitoring Evaluation (CME)	TSD-Groundwater Monitoring Requirements	10/17/1985



ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
MICHIGAN CITY	1004484204	PARTS CITY	5000 S FRANKLIN CITY	46360	FINDS, VCP	
MICHIGAN CITY	1000762613	MICHIGAN CITY PORT AUTHORITY	200 HEISMAN HARBOR DR.	46360	LUST, UST	17227
MICHIGAN CITY	U003113855	MICHIGAN CITY FIRE DEPARTMENT	300 KARWICK RD	46360	UST	19830
MICHIGAN CITY	1000761734	MICHIGAN CITY MARINA	1 NEWPORT DR	46360	LUST, UST	18311
MICHIGAN CITY	1003873115	KARWICK ROAD DUMP	NE OF KARWICK & WAMKE ROADS	46360	CERC-NFRAP	
MICHIGAN CITY	U001078735	MICHIGAN CITY GENERATING STATION	WABASH ST @ THE LAKE	46360	UST, LUST	6094
MICHIGAN CITY	1000841344	NIPSCO MICHIGAN CITY GENERATING ST	WABASH AT LAKE MICHIGAN	46360	FINDS, RCRIS-LQG, RCRIS-TSD, CORRACTS, IN Spills	199510029
MICHIGAN CITY	1000241418	MICHIGAN CITY DRUM SITE	50 YRDS N OF THE E-W SEGMENT O	46360	CERCLIS, FINDS	
TOWN OF PINES	1004654439	TOWN OF PINES FLY ASH DUMP	CONNECTICUT AVE	46360	CERCLIS	

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List

Source: EPA

Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/29/02

Date Made Active at EDR: 02/25/02

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/04/02

Elapsed ASTM days: 21

Date of Last EDR Contact: 02/04/02

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1

Telephone 617-918-1143

EPA Region 6

Telephone: 214-655-6659

EPA Region 3

Telephone 215-814-5418

EPA Region 8

Telephone: 303-312-6774

EPA Region 4

Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Source: EPA

Telephone: N/A

Date of Government Version: 01/17/02

Date Made Active at EDR: 02/25/02

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/04/02

Elapsed ASTM days: 21

Date of Last EDR Contact: 02/04/02

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

Source: EPA

Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 11/21/01

Date Made Active at EDR: 02/04/02

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/26/01

Elapsed ASTM days: 40

Date of Last EDR Contact: 12/26/01

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Source: EPA

Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/21/01
Date Made Active at EDR: 02/04/02
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/26/01
Elapsed ASTM days: 40
Date of Last EDR Contact: 12/16/01

CORRACTS: Corrective Action Report

Source: EPA
Telephone: 800-424-9346

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 11/14/01
Date Made Active at EDR: 01/14/02
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 11/14/01
Elapsed ASTM days: 61
Date of Last EDR Contact: 11/14/01

RCRIS: Resource Conservation and Recovery Information System

Source: EPA/NTIS
Telephone: 800-424-9346

Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 06/21/00
Date Made Active at EDR: 07/31/00
Database Release Frequency: Varies

Date of Data Arrival at EDR: 07/10/00
Elapsed ASTM days: 21
Date of Last EDR Contact: 01/14/02

ERNS: Emergency Response Notification System

Source: EPA/NTIS
Telephone: 202-260-2342

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 08/08/00
Date Made Active at EDR: 09/06/00
Database Release Frequency: Varies

Date of Data Arrival at EDR: 08/11/00
Elapsed ASTM days: 26
Date of Last EDR Contact: 02/01/02

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System

Source: EPA/NTIS
Telephone: 800-424-9346

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/99
Database Release Frequency: Biennially

Date of Last EDR Contact: 12/17/01
Date of Next Scheduled EDR Contact: 03/18/02

CONSENT: Superfund (CERCLA) Consent Decrees

Source: EPA Regional Offices
Telephone: Varies

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A
Database Release Frequency: Varies

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

ROD: Records Of Decision

Source: NTIS
Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/30/00
Database Release Frequency: Annually

Date of Last EDR Contact: 01/07/02
Date of Next Scheduled EDR Contact: 04/08/02

DELISTED NPL: National Priority List Deletions

Source: EPA
Telephone: N/A

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/29/02
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/04/02
Date of Next Scheduled EDR Contact: 05/06/02

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report

Source: EPA
Telephone: N/A

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/29/01
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/07/02
Date of Next Scheduled EDR Contact: 04/08/02

HMIRS: Hazardous Materials Information Reporting System

Source: U.S. Department of Transportation
Telephone: 202-366-4526

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/30/01
Database Release Frequency: Annually

Date of Last EDR Contact: 01/21/02
Date of Next Scheduled EDR Contact: 04/22/02

MLTS: Material Licensing Tracking System

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/01
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/07/02
Date of Next Scheduled EDR Contact: 04/08/02

MINES: Mines Master Index File

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 12/14/01
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/02/02
Date of Next Scheduled EDR Contact: 04/01/02

NPL LIENS: Federal Superfund Liens

Source: EPA
Telephone: 205-564-4267

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 11/19/01
Date of Next Scheduled EDR Contact: 02/18/02

PADS: PCB Activity Database System

Source: EPA

Telephone: 202-260-3936

PCB Activity Database. PADS identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/30/01
Database Release Frequency: Annually

Date of Last EDR Contact: 02/12/02
Date of Next Scheduled EDR Contact: 05/13/02

RAATS: RCRA Administrative Action Tracking System

Source: EPA

Telephone: 202-564-4104

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/11/01
Date of Next Scheduled EDR Contact: 03/11/02

TRIS: Toxic Chemical Release Inventory System

Source: EPA

Telephone: 202-260-1531

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/99
Database Release Frequency: Annually

Date of Last EDR Contact: 12/26/01
Date of Next Scheduled EDR Contact: 03/25/02

TSCA: Toxic Substances Control Act

Source: EPA

Telephone: 202-260-5521

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/98
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 01/22/02
Date of Next Scheduled EDR Contact: 04/22/02

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-564-2501

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/11/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/26/01
Date of Next Scheduled EDR Contact: 03/25/02

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Source: EPA

Telephone: 202-564-2501

Date of Government Version: 01/14/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/26/01
Date of Next Scheduled EDR Contact: 03/25/02

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF INDIANA ASTM STANDARD RECORDS

SHWS: List of Hazardous Waste Response Sites Scored Using the Indiana Scoring Model

Source: Department of Environmental Management

Telephone: 317-308-3052

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 01/02/02

Date Made Active at EDR: 02/01/02

Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/11/02

Elapsed ASTM days: 21

Date of Last EDR Contact: 01/04/02

SWF/LF: Permitted Solid Waste Facilities

Source: Department of Environmental Management

Telephone: 317-232-0066

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/11/01

Date Made Active at EDR: 02/06/02

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 01/14/02

Elapsed ASTM days: 23

Date of Last EDR Contact: 01/14/02

LUST: Lust Leaking Underground Storage Tank List

Source: Department of Environmental Management

Telephone: 317-308-3008

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 12/19/01

Date Made Active at EDR: 01/14/02

Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/02/02

Elapsed ASTM days: 12

Date of Last EDR Contact: 01/02/02

UST: Indiana Registered Underground Storage Tanks

Source: Department of Environmental Management

Telephone: 317-308-3008

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 12/19/01

Date Made Active at EDR: 01/17/02

Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/02/02

Elapsed ASTM days: 15

Date of Last EDR Contact: 01/02/02

VCP: Voluntary Remediation Program Site List

Source: Department of Environmental Management

Telephone: 317-234-0966

A current list of Voluntary Remediation Program sites that are no longer confidential.

Date of Government Version: 12/01/01

Date Made Active at EDR: 02/22/02

Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/08/02

Elapsed ASTM days: 14

Date of Last EDR Contact: 02/08/02

STATE OF INDIANA ASTM SUPPLEMENTAL RECORDS

SPILLS: Spills Incidents

Source: Department of Environmental Management

Telephone: 317-308-3008

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/19/01
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 01/02/02
Date of Next Scheduled EDR Contact: 04/02/02

EDR PROPRIETARY HISTORICAL DATABASES

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

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OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines/Electrical Transmission Lines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 1999 from the U.S. Fish and Wildlife Service.

GEOCHECK® - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

MICHIGAN CITY-KARWICK RD LANDFILL SITE
KARWICK ROAD
MICHIGAN CITY, IN 46360

TARGET PROPERTY COORDINATES

Latitude (North):	41.710899 - 41° 42' 39.2"
Longitude (West):	86.856499 - 86° 51' 23.4"
Universal Transverse Mercator:	Zone 16
UTM X (Meters):	511938.3
UTM Y (Meters):	4617475.5

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.



GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property: 2441086-F7 MICHIGAN CITY EAST, IN
Source: USGS 7.5 min quad index

GENERAL TOPOGRAPHIC GRADIENT AT TARGET PROPERTY

Target Property: General West

Source: General Topographic Gradient has been determined from the USGS 1 Degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified:

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Target Property County</u>	<u>FEMA Flood</u>
LA PORTE, IN	<u>Electronic Data</u>
	YES - refer to the Overview Map and Detail Map
 Flood Plain Panel at Target Property:	1801470010B / CBPP
 Additional Panels in search area:	00000000000 / UNMC
	1801470005B / CBPP
	1801470015B / CBPP
	1801470020B / CBNP

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic</u>
MICHIGAN CITY EAST	<u>Data Coverage</u>
	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

AQUIFLOW®

Search Radius: 2.000 Miles.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

GEOLOGIC AGE IDENTIFICATION

Era:	Paleozoic	Category: Stratified Sequence
System:	Devonian	
Series:	Upper Devonian	
Code:	D3 (decoded above as Era, System & Series)	

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	CRAIGMILE
Soil Surface Texture:	fine sandy loam
Hydrologic Group:	Class B/D - Drained/undrained hydrology class of soils that can be drained and are classified.
Soil Drainage Class:	Very poorly. Soils are wet to the surface most of the time. Depth to water table is less than 1 foot, or is ponded.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Soil meets the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	12 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 7.30 Min: 5.60
2	12 inches	25 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 6.00 Min: 2.00	Max: 7.30 Min: 6.10
3	25 inches	60 inches	loamy sand	Granular materials (35 pct. or less passing No. 200), Fine Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 7.80 Min: 6.60

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: silt loam
loamy sand
loamy fine sand
sandy loam
muck
sapric material
sand
loam

Surficial Soil Types: silt loam
loamy sand
loamy fine sand
sandy loam
muck
sapric material
sand
loam

Shallow Soil Types: coprogenous earth
fine sandy loam

Deeper Soil Types: sand

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

loam
stratified
sapric material
fine sand
sandy loam
loamy fine sand

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A1	414245086512301	0 - 1/8 Mile North
A2	414245086512301	0 - 1/8 Mile North
B3	414231086511301	1/8 - 1/4 Mile SE
B4	414231086511301	1/8 - 1/4 Mile SE
C5	414245086514001	1/4 - 1/2 Mile WNW
C6	414245086514001	1/4 - 1/2 Mile WNW
D7	414224086512101	1/4 - 1/2 Mile South
D8	414224086512101	1/4 - 1/2 Mile South
E9	414233086510301	1/4 - 1/2 Mile ESE
E10	414233086510301	1/4 - 1/2 Mile ESE
B11	414224086511101	1/4 - 1/2 Mile SSE
B12	414224086511101	1/4 - 1/2 Mile SSE
E13	414237086505501	1/4 - 1/2 Mile East
E14	414237086505501	1/4 - 1/2 Mile East
F15	414238086505401	1/4 - 1/2 Mile East
F16	414238086505401	1/4 - 1/2 Mile East
G17	414203086511001	1/2 - 1 Mile SSE
G18	414203086511001	1/2 - 1 Mile SSE
G19	414202086511101	1/2 - 1 Mile SSE
G20	414202086511101	1/2 - 1 Mile SSE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
H21	414256086503701	1/2 - 1 Mile ENE
H22	414256086503701	1/2 - 1 Mile ENE
I23	414157086511701	1/2 - 1 Mile South
I24	414157086511701	1/2 - 1 Mile South
J25	414204086515601	1/2 - 1 Mile SW
J26	414204086515601	1/2 - 1 Mile SW
J27	414203086515701	1/2 - 1 Mile SW
J28	414203086515701	1/2 - 1 Mile SW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

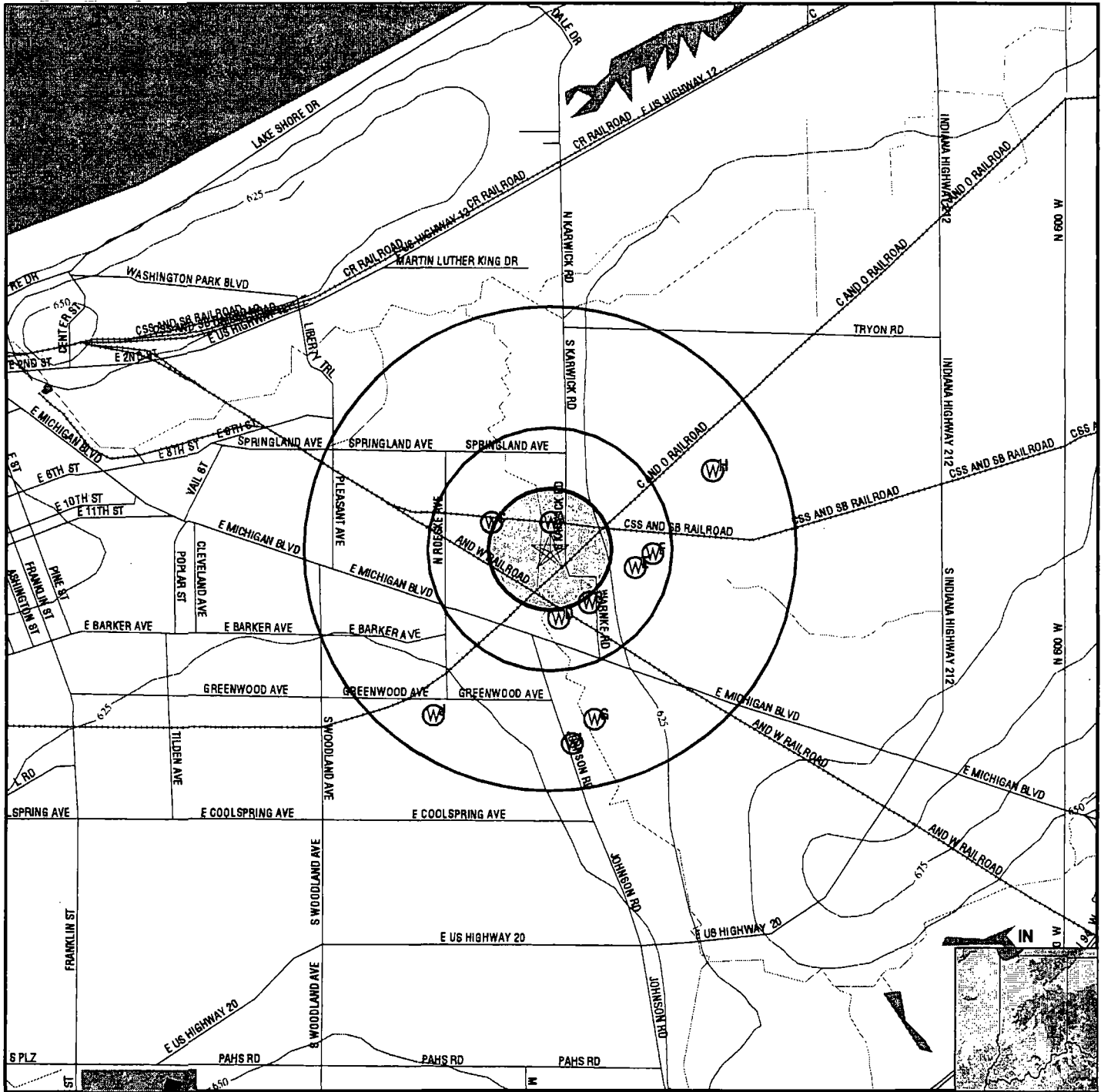
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 738374.3s



- Major Roads
- Contour Lines
- Airports
- Water Wells
- Public Water Supply Wells
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Cluster of Multiple Icons

⊙ Earthquake epicenter, Richter 5 or greater

TARGET PROPERTY: Michigan City-Karwick Rd Landfill Site
ADDRESS: Karwick Road
CITY/STATE/ZIP: Michigan City IN 46360
LAT/LONG: 41.7109 / 86.8565

CUSTOMER: Advanced Pollution Tech.
CONTACT: Andrea DePoy
INQUIRY #: 738374.3s
DATE: February 25, 2002 1:39 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

A1
North
0 - 1/8 Mile
Higher

FED USGS 414245086512301

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1952	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	61.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	20.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	09251952	Prim. Use of Water:	Domestic

A2
North
0 - 1/8 Mile
Higher

FED USGS 414245086512301

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1952	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	61.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	20.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	09251952	Prim. Use of Water:	Domestic

B3
SE
1/8 - 1/4 Mile
Higher

FED USGS 414231086511301

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	17.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Not Reported
Date Measured:	Not Reported	Prim. Use of Water:	Not Reported

B4
SE
1/8 - 1/4 Mile
Higher

FED USGS 414231086511301

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	17.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Not Reported
Date Measured:	Not Reported	Prim. Use of Water:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

C5
WNW
1/4 - 1/2 Mile
Higher

FED USGS 414245086514001

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1954	County:	La Porte
Altitude:	625.00 ft.	State:	Indiana
Well Depth:	19.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	6.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	05121954	Prim. Use of Water:	Domestic

C6
WNW
1/4 - 1/2 Mile
Higher

FED USGS 414245086514001

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1954	County:	La Porte
Altitude:	625.00 ft.	State:	Indiana
Well Depth:	19.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	6.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	05121954	Prim. Use of Water:	Domestic

D7
South
1/4 - 1/2 Mile
Higher

FED USGS 414224086512101

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1956	County:	La Porte
Altitude:	625.00 ft.	State:	Indiana
Well Depth:	27.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	13.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	12291956	Prim. Use of Water:	Domestic

D8
South
1/4 - 1/2 Mile
Higher

FED USGS 414224086512101

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1956	County:	La Porte
Altitude:	625.00 ft.	State:	Indiana
Well Depth:	27.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	13.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	12291956	Prim. Use of Water:	Domestic

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

E9
ESE
1/4 - 1/2 Mile
Higher

FED USGS 414233086510301

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1944	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	140.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Test
Date Measured:	Not Reported	Prim. Use of Water:	Not Reported

E10
ESE
1/4 - 1/2 Mile
Higher

FED USGS 414233086510301

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1944	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	140.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Test
Date Measured:	Not Reported	Prim. Use of Water:	Not Reported

B11
SSE
1/4 - 1/2 Mile
Higher

FED USGS 414224086511101

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1956	County:	La Porte
Altitude:	625.00 ft.	State:	Indiana
Well Depth:	28.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

B12
SSE
1/4 - 1/2 Mile
Higher

FED USGS 414224086511101

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1956	County:	La Porte
Altitude:	625.00 ft.	State:	Indiana
Well Depth:	28.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

E13
East
1/4 - 1/2 Mile
Higher

FED USGS 414237086505501

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1953	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	21.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	9.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	07011953	Prim. Use of Water:	Industrial

E14
East
1/4 - 1/2 Mile
Higher

FED USGS 414237086505501

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1953	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	21.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	9.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	07011953	Prim. Use of Water:	Industrial

F15
East
1/4 - 1/2 Mile
Higher

FED USGS 414238086505401

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	19.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	8.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Public supply

F16
East
1/4 - 1/2 Mile
Higher

FED USGS 414238086505401

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	19.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	8.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Public supply

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

G17
SSE
1/2 - 1 Mile
Higher

FED USGS 414203086511001

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1957	County:	La Porte
Altitude:	630.00 ft.	State:	Indiana
Well Depth:	20.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	13.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	03261957	Prim. Use of Water:	Domestic

G18
SSE
1/2 - 1 Mile
Higher

FED USGS 414203086511001

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1957	County:	La Porte
Altitude:	630.00 ft.	State:	Indiana
Well Depth:	20.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	13.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	03261957	Prim. Use of Water:	Domestic

G19
SSE
1/2 - 1 Mile
Higher

FED USGS 414202086511101

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	La Porte
Altitude:	630.00 ft.	State:	Indiana
Well Depth:	30.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	10.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

G20
SSE
1/2 - 1 Mile
Higher

FED USGS 414202086511101

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	La Porte
Altitude:	630.00 ft.	State:	Indiana
Well Depth:	30.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	10.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

H21
ENE
1/2 - 1 Mile
Higher

FED USGS 414256086503701

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1957	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	103.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

H22
ENE
1/2 - 1 Mile
Higher

FED USGS 414256086503701

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1957	County:	La Porte
Altitude:	620.00 ft.	State:	Indiana
Well Depth:	103.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

I23
South
1/2 - 1 Mile
Higher

FED USGS 414157086511701

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1957	County:	La Porte
Altitude:	635.00 ft.	State:	Indiana
Well Depth:	140.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	40.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	05011957	Prim. Use of Water:	Public supply

I24
South
1/2 - 1 Mile
Higher

FED USGS 414157086511701

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1957	County:	La Porte
Altitude:	635.00 ft.	State:	Indiana
Well Depth:	140.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	40.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	05011957	Prim. Use of Water:	Public supply

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

J25
SW
1/2 - 1 Mile
Higher

FED USGS 414204086515601

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1957	County:	La Porte
Altitude:	630.00 ft.	State:	Indiana
Well Depth:	33.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	8.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	04011957	Prim. Use of Water:	Domestic

J26
SW
1/2 - 1 Mile
Higher

FED USGS 414204086515601

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1957	County:	La Porte
Altitude:	630.00 ft.	State:	Indiana
Well Depth:	33.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	8.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	04011957	Prim. Use of Water:	Domestic

J27
SW
1/2 - 1 Mile
Higher

FED USGS 414203086515701

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1954	County:	La Porte
Altitude:	630.00 ft.	State:	Indiana
Well Depth:	32.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	5.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	08101954	Prim. Use of Water:	Domestic

J28
SW
1/2 - 1 Mile
Higher

FED USGS 414203086515701

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	1954	County:	La Porte
Altitude:	630.00 ft.	State:	Indiana
Well Depth:	32.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	5.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	08101954	Prim. Use of Water:	Domestic

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for LA PORTE County: 2

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level \geq 2 pCi/L and \leq 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

Zip Code: 46360

Number of sites tested: 16

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.789 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.394 pCi/L	94%	6%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 1999 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[®] Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the national Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-260-2805

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-260-2805

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

Indiana Community and Non-Community Wells

Source: Department of Environmental Management

Telephone: 317-232-8476

RADON

Area Radon Information: The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones: Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration



APPENDIX B

Preliminary Assessment - Karwick Road Dump
(Indiana Department of Environmental Management, 1992)



• Environmental Consultants •
Mishawaka, IN



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

APR 03 2002

SM- 4J

Andrea M. DePoy
APT. Limited
6910 North Main St., Unit 17
Granger, IN 46530

RE: Freedom of Information Act
Request Identification Number: 05-RIN-00814-02
Subject: Karwick Road Dump
Project / File Number:

Dear Ms. DePoy:

The enclosed information is provided in response to your Freedom of Information Act (FOIA) request dated March 06, 2002. This request has been designated by the United States Environmental Protection Agency (U.S. EPA) as a multi-program Combined Billing request.

The nature of your request indicates documents may be available from two or more Offices or Divisions within Region 5. Charges may be applicable from each Office or Division processing your request.

Each Office and/or Division involved in processing this request will provide you with a response. Once all the responses have been forwarded to you, a Bill for Collection assessing the compilation of all costs incurred by the Agency in answering your request will be provided to you (within 10 days from the date of the last response).

If you wish, you can submit a request through the FOIA Home Page at <http://www.epa.gov/Region5/foia.htm> or through e-mail at r5foia@epamail.epa.gov. Also, if you wish to view sites in Region 5 you can go this Home Page at <http://www.epa.gov/region5superfund/>

Should you have questions or need additional assistance, I may be contacted at (312) 353-3167. For all other matters, please contact Carolyn D. Bohlen, Chief, Documents Management Section at (312) 886-6541.

Sincerely,

Frederick D. Gage

Frederick D. Gage, Documents Management Section
Freedom of Information Act Specialist for Illinois

Enclosure

cc: FOIA File
Region 5 FOIA Office (MI-9J)

Index of Documents for Site Assessment

Site Name: Kanawick Road Dump State: ILLINOIS

The documents indicated by the (X) mark on the list below are provided in response to your Freedom of Information Act (F.O.I.A.) request.

☒ The documents listed below were photocopied in-house.
() The documents listed below were duplicated by: _____ Copy Service

- () Focused Site Inspection Prioritization Site Evaluation Report
- () CERCLE Site Inspection Prioritization Report
- () Site Assessment Report
- () CERCLA Screening Site Inspection Report
- () Expanded Site Inspection Report
- () Integrated Assessment - PA & SI
- () Site Inspection Report (SI)
- () CERCLA Preliminary Assessment Report
- () Executive Summary
- () Screen Site Inspection Report
- () Aerial Photographic Analysis
- () Site Team Evaluation Prioritization CERCLEA
- () Illinois Environmental Protection Agency Documents (Illinois EPA)
- ☒ Preliminary Assessment Report
- () Notification of Hazardous Waste Activity
- () Notification of Hazardous Waste Site
- () Photos () Map(s) () Newspaper
- () Preliminary Assessment Visual Site Inspection
- () Analytical Data Report
- () CERCLA Site Inspection Report
- () General Information
- () Final Strategy Determination
- () Potential Hazardous Waste Site

() Other: _____

PRELIMINARY ASSESSMENT
FOR
KARWICK ROAD DUMP
MICHIGAN CITY, INDIANA
LAPORTE COUNTY
U.S.EPA ID: IND 985104 546

DUPLICATE
RECORDS CENTER
FLOOR

PRELIMINARY ASSESSMENT
KARWICK ROAD DUMP
MICHIGAN CITY, IN LAPORTE COUNTY
U.S. EPA ID:-----

RECEIVED
NOV 2 - 1992
SITE ASSESSMENT SECTION

Indiana Department of Environmental Management

August 27, 1992

Prepared By:

Dana Reed Wise

Dana Reed Wise
Project Manager

Approved By:

John P. Noss

for Harry E. Atkinson
Site Investigation Section
Section Chief

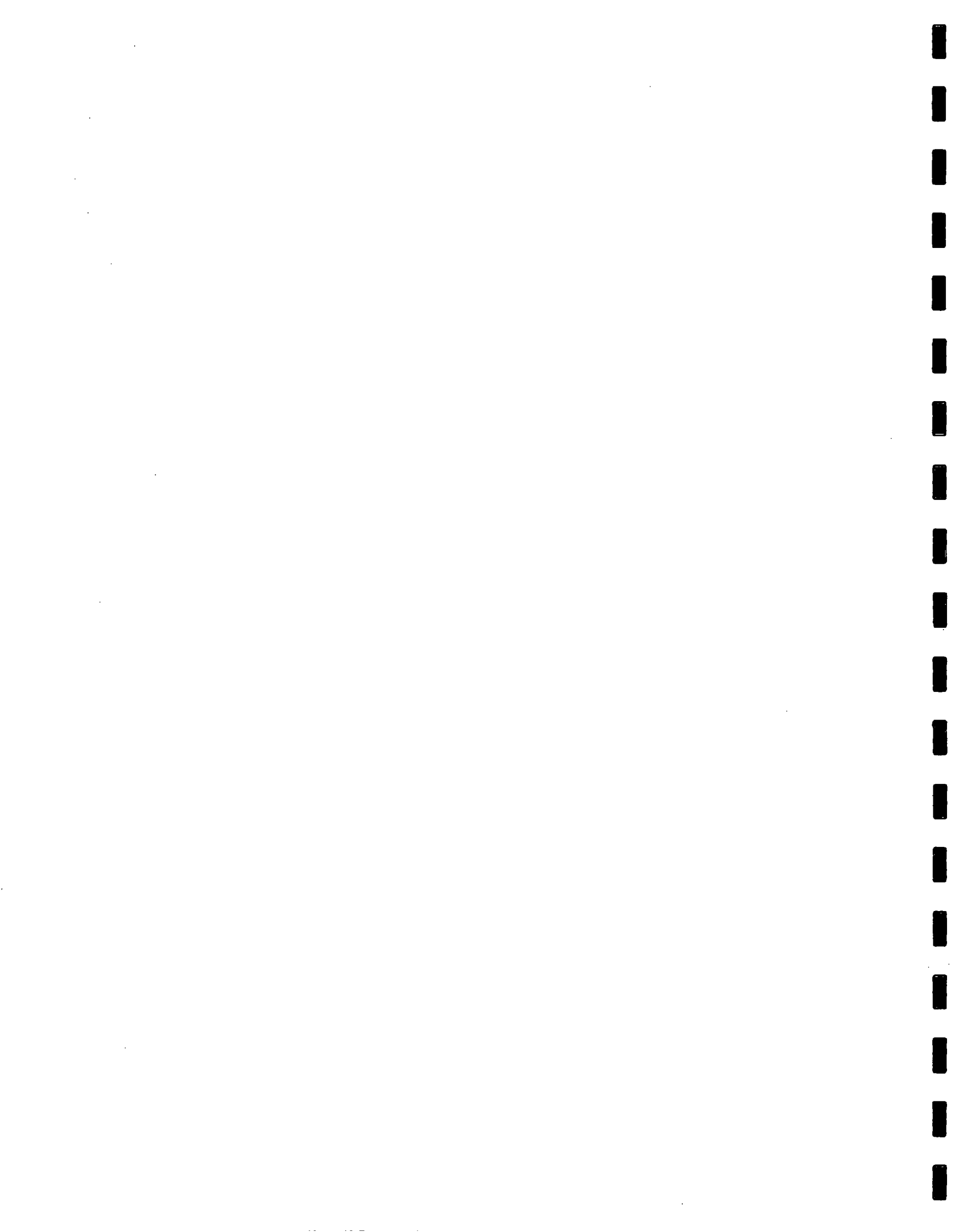
CKT



**KARWICK ROAD DUMP
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8. FEMA Flood Insurance Rate Map
9. IDNR Well Logs and Locator Map
10. Sensitive Environment Information
11. Blue Line Map
12. Geologic Assessment
13. Map from Michigan City Water Works





INTRODUCTION

Under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), the Indiana Department of Environmental Management (IDEM) conducted a preliminary assessment (PA) at the Karwick Road Dump site in Michigan City, Indiana, LaPorte County. The purpose of a preliminary assessment is to distinguish between sites that pose little or no threat to human health and the environment and sites that require further action. It also identifies sites requiring an assessment for possible emergency response actions. The PA investigation consisted of a review of all available file information, interviews with site representatives and an on-site reconnaissance.

SITE DESCRIPTION

The Karwick Road Dump is located between Karwick Road and Trail Creek, northeast of the intersection of Warnke Road and Karwick Road, on the east side of Michigan City, LaPorte County. The site is 1 and 1/2 mile north of the town of Trail Creek. The site is in Section 27, Township 38 N, Range 4 W. The geographic coordinates are 41 42' 38.5"N latitude and 86 51' 25.0" W longitude. To reach the facility from Indianapolis, drive north on U.S. 421 to U.S. 20. Drive east on U.S. 20 to Warnke Road. Turn left on Warnke Road, driving west to Karwick Road. The dump site is located off Karwick Road, beside Trail Creek.

The site is located 1/4 mile east of a municipal water supply tank and is within 500 feet south of the nearest residence. The site is bordered by Trail Creek on the west, Karwick Road on the east, residential property on the north and Warnke road on the south. The approximate area of the site is 8 acres.

WASTE CHARACTERISTICS

The waste characteristics for the Karwick Road Dump are unknown. Allegedly, the site was only used as a municipal dump and for the disposal of other solid waste debris. Although there is no evidence that hazardous materials were ever disposed in the dump, given the age of the site, there is a potential for hazardous waste to be present.

OPERATIONAL HISTORY

File information for the Karwick Road Dump is scarce. The information contained in this preliminary assessment was obtained from interviews with individuals having knowledge of the site, a site visit and aerial photographs.

Mr. Jim McCarty, General Manager, from the Michigan City Sanitary District (MCSD) was interviewed on August 26, 1992. Mr. McCarty stated that the site is a closed landfill that was used

by the city as a municipal landfill. It was also used for disposal of construction debris and other solid waste. However, the landfill was never permitted and was not restricted. It was used by residents in the area as an open dump. The Indiana Department of Natural Resources (IDNR) began inspecting the site in 1990, after receiving complaints that wastes from the site were entering Trail Creek. Water from the creek had eroded the bank of the site, exposing the wastes and causing leachate to drain into the creek. Soil/sediment samples were collected from the leachate area by the MCSD. The samples were analyzed for metals, polychlorinated biphenyls and sulfides. No contaminants were detected at levels of concern. A temporary clay "patch" was placed onto the bank to stop the erosion.

Mr. Joseph Tite, Engineer, from the Joseph L. Tite Engineering firm, was hired by the MCSD to construct a closure for the dump. Mr. Tite was interviewed on August 27, 1992. He has developed a plan to secure the bank, but construction has not begun. Mr. Tite stated that the site was operated by National Serv-All, a company based in Fort Wayne, Indiana (information obtained from the LaPorte County general file shows the site was operated by the Cotton Brothers). He believed the site was only operated as a municipal landfill, but given its years of operation, 1966 to 1971, there probably were some drums disposed in the dump, but not in any great volume. He also believed that most of the wastes that could be considered hazardous during those years, were probably disposed at the Waste Inc. site in Michigan City, which is listed on the National Priorities List.

A site visit was made by staff on July 23, 1992. The site sits approximately 200 feet off or west of Karwick Road. There was a pathway leading from the road to the dumping area. There were bags of yard wastes, tires, old furniture, demolition debris, old roofing materials and bags of trash present along the path. No evidence of hazardous waste was observed. Tire tracks were noticed in the path. The site was covered with vegetation and the topography was very uneven; numerous mounds were present throughout the site. Presumably, these are areas of buried waste. While walking along the bank of the site, along Trail Creek, pieces of metal were observed in the bank. The top of a drum was noticed lying along the bank. A drain tile leading from the site was emptying into Trail Creek. The water appeared clear, but the soil beneath the tile was orange, probably due to the iron content of the tile. Finally, there were people fishing the creek near the drain tile.

Aerial photographs were examined from the Indiana State Library, Archives Division. The years of the photographs were 1968, 1970 and 1971. The photos show a disturbed area along Trail Creek. The wastes shown appeared to be mainly trash and tires. No evidence of hazardous waste was observed. There was less waste present in the 1971 photograph of the site. During this time, most of the wastes was probably buried.

PATHWAY AND ENVIRONMENTAL HAZARD ASSESSMENT

GROUNDWATER

LaPorte County is located in the northwestern part of Indiana. The Valparaiso Moraine extends across the county in a northeastern direction and divides drainage into northern and southern areas. The land south of the moraine is made up of nearly level to gently sloping soils and drains south to the Kankakee River. The moraine is made up of gently sloping to steep soils that are well dissected by small drainageways. The land north of the moraine is made up of nearly level to steep soils that are lacustrine or sandy. It drains north into Lake Michigan.

The Karwick Road Dump is located in Michigan City, which is in the northwest corner of LaPorte County. The soils at the site are loamy Udorthents, soils that have been disturbed so greatly that the soil type cannot be recognized. The soil survey map indicates that the western portion of the site was probably loamy Fluvaquents and the eastern portion was Oakville fine sand before the area was disturbed. Fluvaquents are deep, nearly level and somewhat poorly drained soils on bottom land. The soils range from silt loam to loamy sand. The Fluvaquents have moderate available water capacity, moderate organic matter content and moderate permeability. Oakville fine sand is a deep, well drained soil. It has low available water capacity and is moderate in organic matter content. The bedrock surface beneath the Karwick Road Dump is the Devonian-age Antrim Shale, a hard black shale that overlies a sedimentary sequence about 4000 feet thick. Overlying the bedrock is between 100 and 150 feet of unconsolidated sediments that contain layers of glacial till, lake sediments, beach deposits, outwash and alluvium.

According to the Department of Water Works in Michigan City, all of their drinking water is obtained from Lake Michigan, thus there are no groundwater wells. However, there are a few private wells in the vicinity of the site, with the closest being within 1/2 mile southwest of the site. Groundwater percolating through the sandy surficial layers probably flows westward toward Trail Creek. Trail Creek flows north, eventually discharging into Lake Michigan.

The well logs obtained from the Indiana Department of Natural Resources (IDNR), Division of Water, show most of the wells are completed in the unconsolidated deposits above the bedrock, but some are in the unconfined aquifer in the surficial sands, mostly 20 to 40 feet, and are relatively unprotected from surface contamination. There are approximately 198 private wells in a 4-mile radius of the site shown on the well log locator maps. The average number of persons per household in Michigan City is 2.73, giving an approximate number of 541 persons potentially served by private wells. However, since most of the water that infiltrates the surface flows horizontally to Trail Creek, and no evidence of hazardous substances are present at the site, neither the groundwater nor any residential wells appear to be threatened by this site.

SURFACE WATER

Surface water flow from the Karwick Road Dump site is by way of Trail Creek, which borders the west side of the site. Trail Creek flows north, then west, then north again, discharging into Lake Michigan at the yacht basin in downtown Michigan City, about 3 miles downstream from the site. Trail Creek flows through residential and commercial areas. The stream is somewhat entrenched as it flows by the site. The site is in the 100-year flood plain.

The Karwick Road Dump does not present a drinking water threat via the surface water. Trail Creek is not used for drinking water and although it eventually discharges into Lake Michigan, any contamination would probably be diluted or unattributable to the site.

The site may present a human food chain threat. During the site visit on July 23, 1992, staff observed individuals fishing along the creek. High water and swift moving water from Trail Creek has repeatedly exposed debris from the dump and washed some of the waste into the creek. A leachate seep was also exposed. Water and sediment samples collected by the Michigan City Sanitary District did not reveal any contaminants of concern.

There are no sensitive environments in or adjacent to the in-water segment of the surface water pathway. Along the 15-mile target distance limit, there many State endangered, rare and threatened plant species, such as the Variegated horsetail, Great plains ladies'-tresses and Pink wintergreen.

There is a small potential for the site to present a threat to the surface water pathway, but given the lack of contamination, it is unlikely.

SOIL EXPOSURE

The soil exposure pathway assesses the threat to human health and the environment by direct exposure to hazardous substances and areas of suspected contamination. Because there are no hazardous substances or areas of suspected contamination, the Karwick Road Dump does not present a threat to the soil exposure pathway.

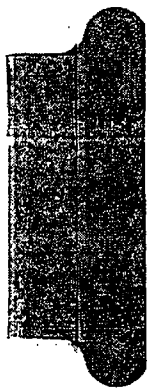
AIR PATHWAY

The Karwick Road Dump does not present a threat of airborne releases of hazardous substances into the environment due to the lack thereof. Smoke was observed at the site in 1983, caused by a burning pile of tires. No other complaints of odors, leaks or emissions into the environment have been reported.

SUMMARY AND CONCLUSIONS

The Karwick Road Dump does not present a significant threat to human health or the environment under CERCLA. However, the site is a threat to the aesthetics of the area because Trail Creek continues to erode the bank of the site, exposing buried wastes, causing trash and debris to wash down the creek. The

site is a solid waste concern and should be addressed by the
solid waste rules and regulations of Indiana.



PA-Score 2.0 Scoresheets
Karwick Road Dump - 08/28/92

Page: 1

OMB Approval Number: 2050-0095
Approved for Use Through: 4/95

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM				IDENTIFICATION	
				State: IN	CERCLIS Number:
				CERCLIS Discovery Date: 6-10-91	
1. General Site Information					
Name: Karwick Road Dump		Street Address: NE of Karwick RD & Warnke Rd			
City: Michigan City	State: IN	Zip Code: 46360	County: LaPorte	Co. Code: 91	Cong. Dist: 3
Latitude: 41° 42' 38.5" Longitude: 86° 51' 25.0"		Approx. Area of Site: 8 acres		Status of Site: Active	
2. Owner/Operator Information					
Owner: Michigan City Sanitary District		Operator: c/o Jim McCarty			
Street Address: P.O. Box 888, 532 Franklin Square		Street Address: Same			
City: Michigan City		City: same			
State: IN	Zip Code: 46360	Telephone: 219 873-7799	State: IN	Zip Code: same	Telephone: same
Type of Ownership: Municipal		How Initially Identified: Other IDNR			

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM	IDENTIFICATION	
	State: IN	CERCLIS Number:
	CERCLIS Discovery Date: 6-10-91	

3. Site Evaluator Information

Name of Evaluator: Dana Reed Wise	Agency/Organization: IDEM/OER/Site Investigation	Date Prepared: 8-27-92
Street Address: 105 S. Meridian Street	City: Indianapolis	State: IN
Name of EPA or State Agency Contact: Harry Atkinson	Telephone: 317/232-8976	
Street Address: 105 s. Meridian Street	City: Indianapolis	State: IN

4. Site Disposition (for EPA use only)

Emergency Response/Removal Assessment Recommendation: No Date:	CERCLIS Recommendation: NFRAP Date: 7-23-92	Signature: <i>Dana Reed Wise</i> Name: Dana Reed Wise Position: Env. Scientist, II WGL
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POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM	IDENTIFICATION	
	State: IN	CERCLIS Number:
	CERCLIS Discovery Date: 6-10-91	

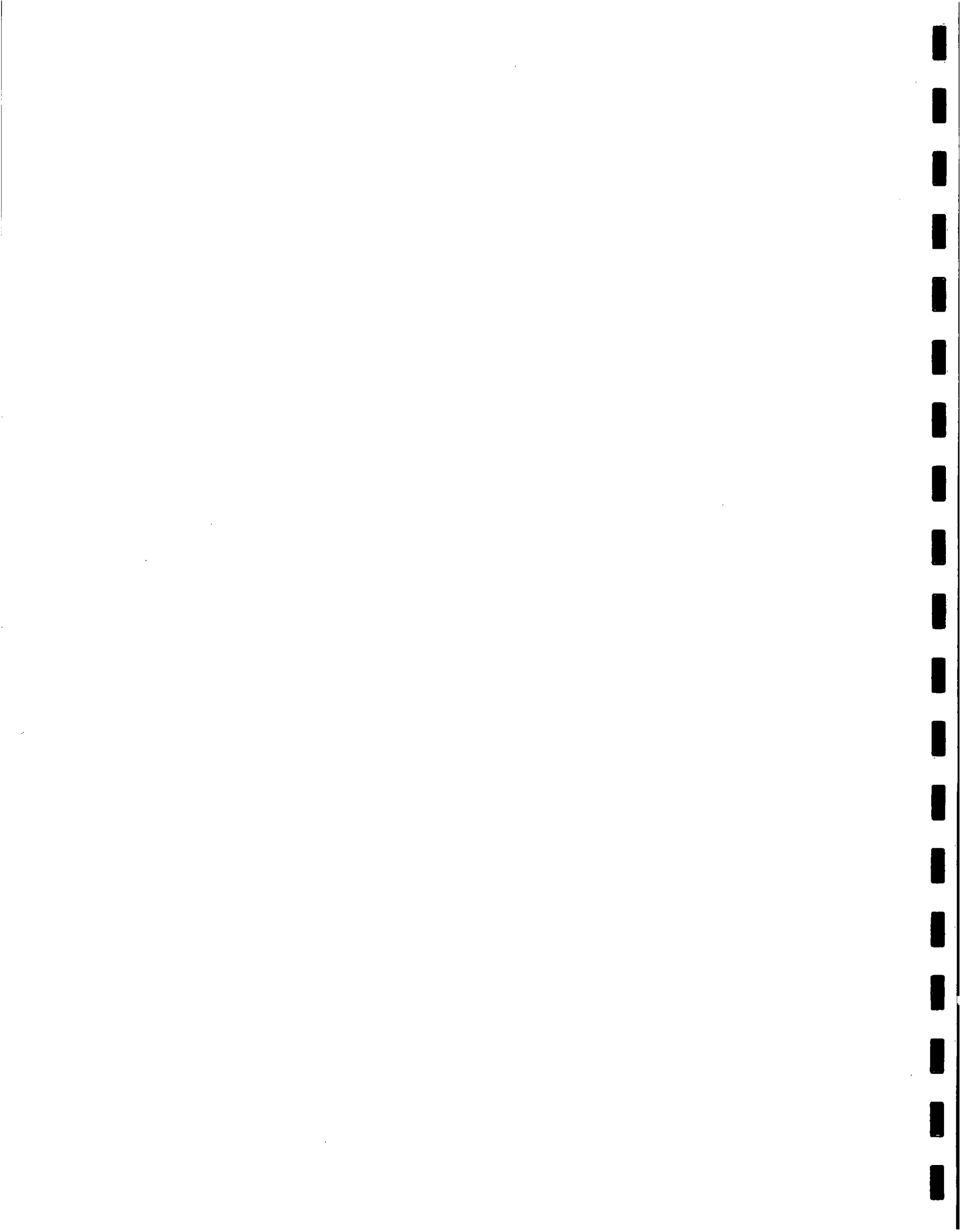
5. General Site Characteristics

Predominant Land Uses Within 1 Mile of Site: Commercial Residential	Site Setting: Urban	Years of Operation: Beginning Year: 1966 Ending Year: 1971
Type of Site Operations: Municipal Landfill		Waste Generated: Offsite
		Waste Deposition Authorized By: Present Owner
		Waste Accessible to the Public Yes
		Distance to Nearest Dwelling, School, or Workplace: 600 Feet

6. Waste Characteristics Information

Source Type Landfill Pile	Quantity 8.00e+00 acres 1.09e+04 sq ft	Tier A A	General Types of Waste: Construction/Demolition Waste Municipal Waste
Tier Legend C = Constituent V = Volume			Physical State of Waste as Deposited Solid
W = Wastestream A = Area			

<p>POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM</p>		IDENTIFICATION															
		State: IN	CERCLIS Number:														
		CERCLIS Discovery Date: 6-10-91															
7. Ground Water Pathway																	
<p>Is Ground Water Used for Drinking Water Within 4 Miles: YES</p> <p>Type of Ground Water Wells Within 4 Miles: Private</p>	<p>Is There a Suspected Release to Ground Water: No</p>	<p>List Secondary Target Population Served by Ground Water Withdrawn From:</p> <table> <tr> <td>0 - 1/4 Mile</td> <td>59</td> </tr> <tr> <td>>1/4 - 1/2 Mile</td> <td>773</td> </tr> <tr> <td>>1/2 - 1 Mile</td> <td>5448</td> </tr> <tr> <td>>1 - 2 Miles</td> <td>19957</td> </tr> <tr> <td>>2 - 3 Miles</td> <td>11101</td> </tr> <tr> <td>>3 - 4 Miles</td> <td>8292</td> </tr> <tr> <td>Total</td> <td>45630</td> </tr> </table>		0 - 1/4 Mile	59	>1/4 - 1/2 Mile	773	>1/2 - 1 Mile	5448	>1 - 2 Miles	19957	>2 - 3 Miles	11101	>3 - 4 Miles	8292	Total	45630
0 - 1/4 Mile	59																
>1/4 - 1/2 Mile	773																
>1/2 - 1 Mile	5448																
>1 - 2 Miles	19957																
>2 - 3 Miles	11101																
>3 - 4 Miles	8292																
Total	45630																
<p>Depth to Shallowest Aquifer: 0 Feet</p> <p>Karst Terrain/Aquifer Present: No</p>	<p>Have Primary Target Drinking Water Wells Been Identified: No</p>																
	<p>Nearest Designated Wellhead Protection Area: None within 4 Miles</p>																



POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FORM	IDENTIFICATION	
	State: IN	CERCLIS Number:
	CERCLIS Discovery Date: 6-10-91	

8. Surface Water Pathway

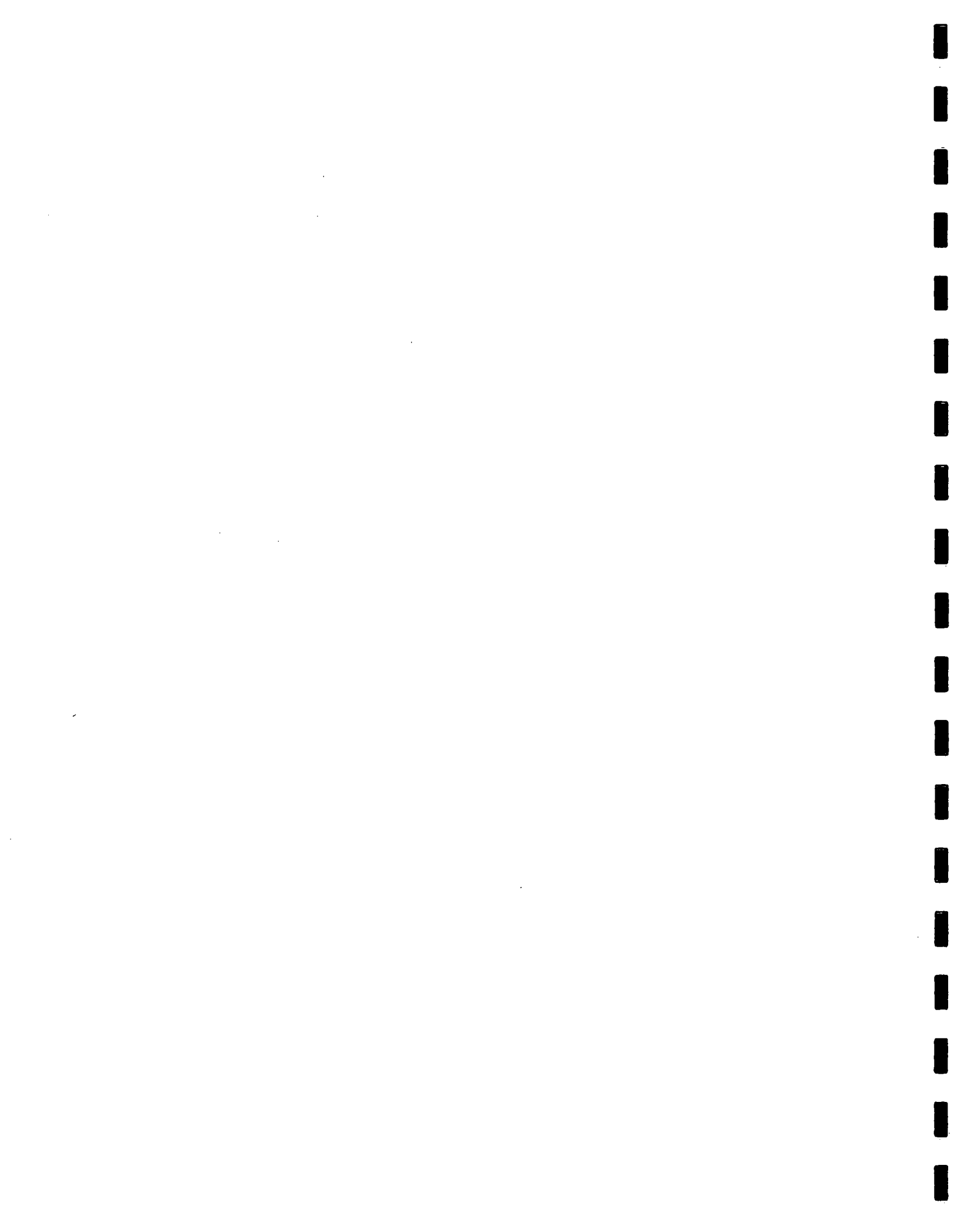
Part 1 of 4

Type of Surface Water Draining Site and 15 Miles Downstream: Lake	Shortest Overland Distance From Any Source to Surface Water: 0 Feet 0.0 Miles
Is there a Suspected Release to Surface Water: Yes	Site is Located in: Annual - 10 yr floodplain

8. Surface Water Pathway

Part 2 of 4

Drinking Water Intakes Along the Surface Water Migration Path: No
Have Primary Target Drinking Water Intakes Been Identified: No
Secondary Target Drinking Water Intakes: None



POTENTIAL HAZARDOUS

WASTE SITE

PRELIMINARY ASSESSMENT FORM

IDENTIFICATION

State:
IN

CERCLIS Number:

CERCLIS Discovery Date:
6-10-91

8. Surface Water Pathway

Part 3 of 4

Fisheries Located Along the Surface Water Migration Path: Yes

Have Primary Target Fisheries Been Identified: Yes

Secondary Target Fisheries:
None

8. Surface Water Pathway

Part 4 of 4

Wetlands Located Along the Surface Water Migration Path? (y/n) No

Have Primary Target Wetlands Been Identified? (y/n) No

Secondary Target Wetlands:
None

Other Sensitive Environments Along the Surface Water Migration Path: Yes

Have Primary Target Sensitive Environments Been Identified: No

Secondary Target Sensitive Environments:

Water Body/Flow(cfs)

Sensitive Environment Type

moderate-large stream/ >100-1000 Federally designated Scenic/Wild River



POTENTIAL HAZARDOUS

WASTE SITE

PRELIMINARY ASSESSMENT FORM

IDENTIFICATION

State:
IN

CERCLIS Number:

CERCLIS Discovery Date:
6-10-91

9. Soil Exposure Pathway

Are People Occupying Residences or
Attending School or Daycare on or
Within 200 Feet of Areas of Known
or Suspected Contamination: No

Number of Workers Onsite: None

Have Terrestrial Sensitive Environments Been Identified on or Within
200 Feet of Areas of Known or Suspected Contamination: No

10. Air Pathway

Total Population on or Within:	
Onsite	0
0 - 1/4 Mile	59
>1/4 - 1/2 Mile	773
>1/2 - 1 Mile	5448
>1 - 2 Miles	19957
>2 - 3 Miles	11101
>3 - 4 Miles	8292
Total	45630

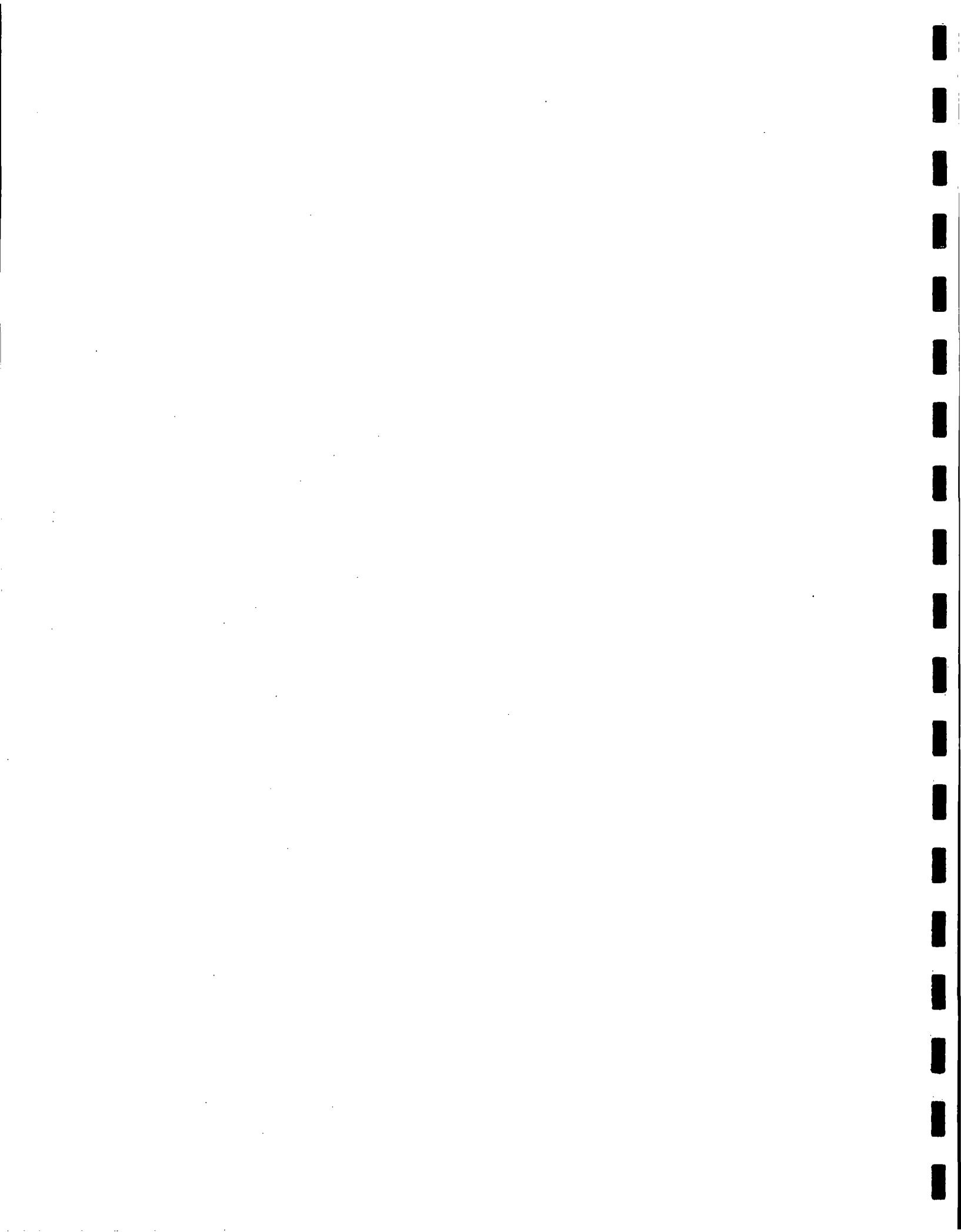
Is There a Suspected Release to Air: No

Wetlands Located
Within 4 Miles of the Site: No

Other Sensitive Environments Located
Within 4 Miles of the Site: Yes

Sensitive Environments Within 1/2 Mile of the Site:

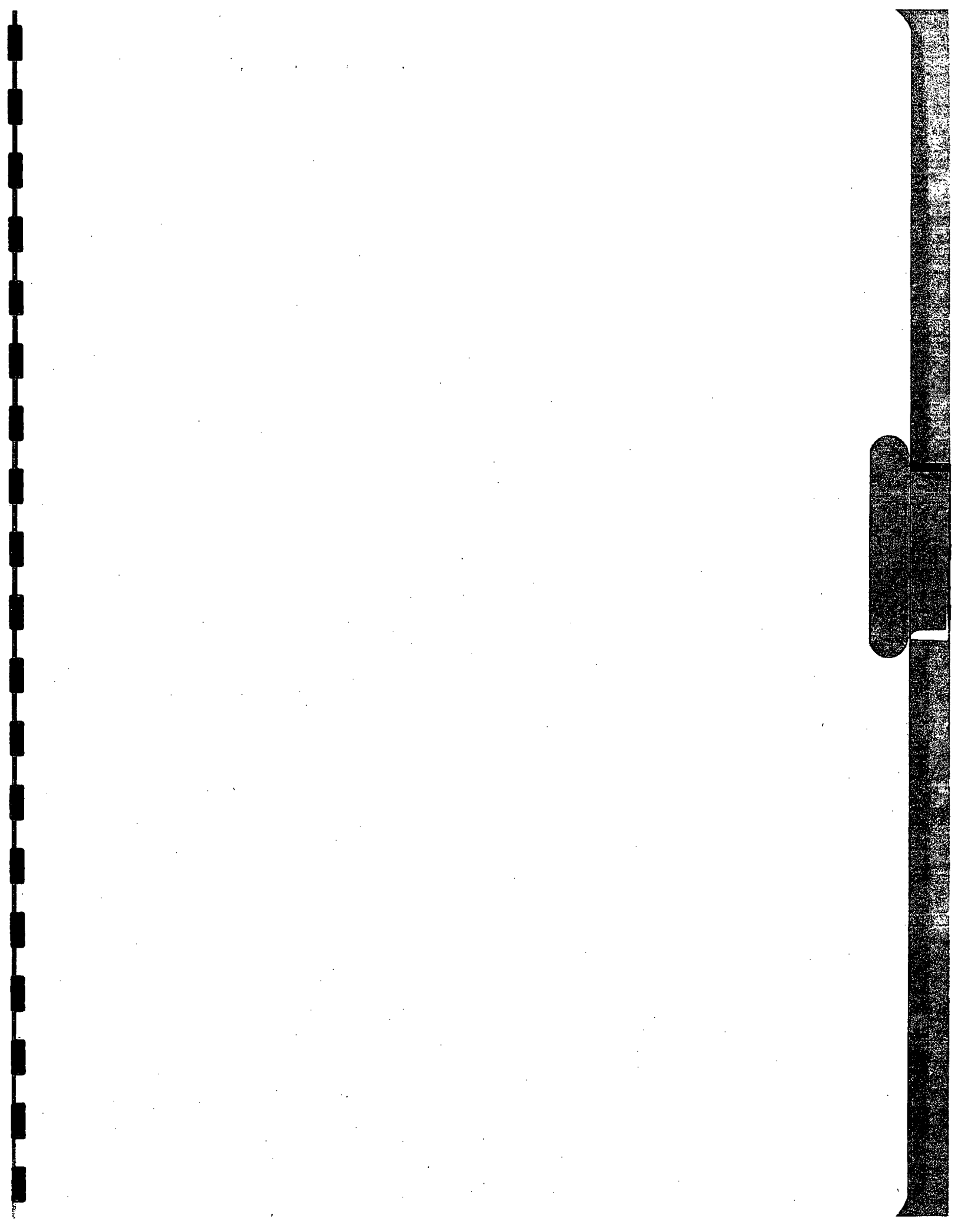
Distance	Sensitive Environment Type/Wetlands Area(acres)
>1/4 - 1/2	National Preserve

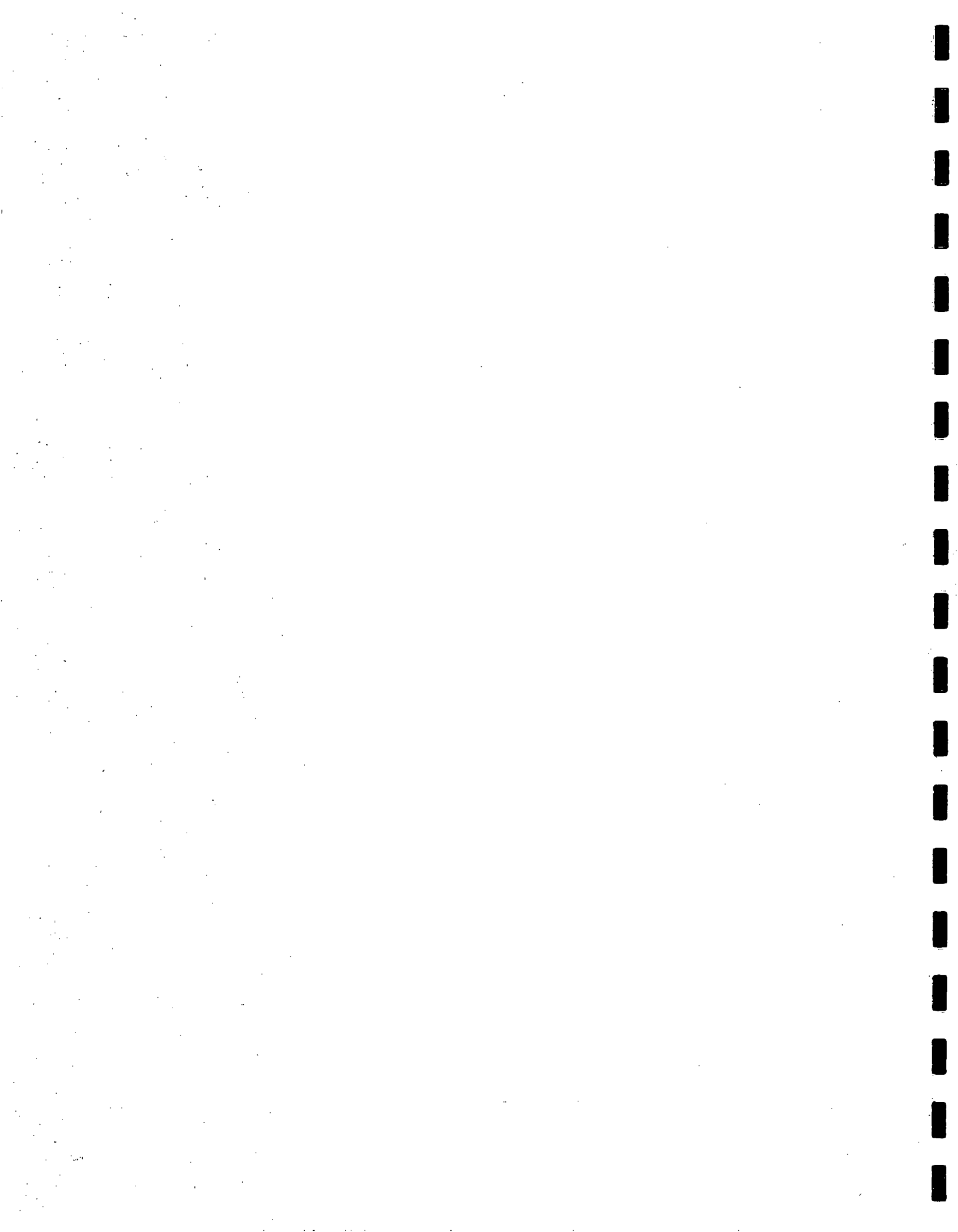


REFERENCES

1. Telephone interview with Mr. Jim McCarty, general manager, Michigan City Sanitary District, August 26, 1992, by Dana Reed Wise.
2. Telephone interview with Mr. Joseph L. Tite, engineer, Joseph L. Tite Engineering, August 27, 1992, by Dana Reed Wise.
3. Site visit conducted by Dana Reed Wise, Billy Giles, John Naddy and Michele Oertel on July 23, 1992.
4. Aerial photographs of the Karwick Road Dump area, 1968, 1970-1971, from the Indiana State Library, Archives Division.
5. USDA Soil Survey of LaPorte County, 1982.
6. Geologic assessment written by Billy Giles on the Karwick Road Dump, August 28, 1992.
7. U.S. Bureau of the Census - population and housing characteristics, 1990.
8. Information and map for the public water supply in Michigan City from Randall E. Russell, superintendent, Michigan City Department of Water Works.
9. USGS Topographic Maps:

Michigan City East	1969, rev. 1980
Michigan City West	1969, rev. 1980
New Buffalo West	1970
10. Indiana Department of Natural Resources (IDNR), Division of Water - well logs and maps.
11. Sensitive environment information from Cloyce Hedge, IDNR, Indiana Natural Heritage Data Center.
12. Analytical results from Northern Laboratories, October 24, 1990.
13. FEMA Flood Insurance Rate Map, No. 180147 0010 B, city of Michigan City, IN, LaPorte County.
14. Guidance for Performing Preliminary Assessments Under CERCLA, U.S. EPA September 1991.







Karwick Road Dump

Facility

John Naddy

7-23-92 3:30p

Photographer

Date

Time

Others Present: Dana Reed Wise, Billy

Giles, Michele Oertel

Location: Michigan City, LaPorte County

Subject (movement): Drain tile leading from the site, emptying into Trail Creek

SF 39674

Dept. of Environmental Mgmt.

Karwick Road Dump

Facility

John Naddy

7-23-92 3:40P

Photographer

Date

Time

Others Present: Dana Reed Wise, Billy

Giles, Michele Oertel

Location: Michigan City, LaPorte County

Subject (movement): Yard wastes and other debris.

SF 39674

Dept. of Environmental Mgmt.

Karwick Road Dump

Facility

John Naddy

7-23-92 3:35 P

Photographer

Date

Time

Others Present: Dana Reed Wise, Billy Giles, Michele Oertel

Location: Michigan City, LaPorte County

Subject (movement): Pathway on the site

SF 39674

Dept. of Environmental Mgmt.

Karwick Road Dump

Facility

Dana Reed Wise

7-23-92 3:45 pm

Photographer

Date

Time

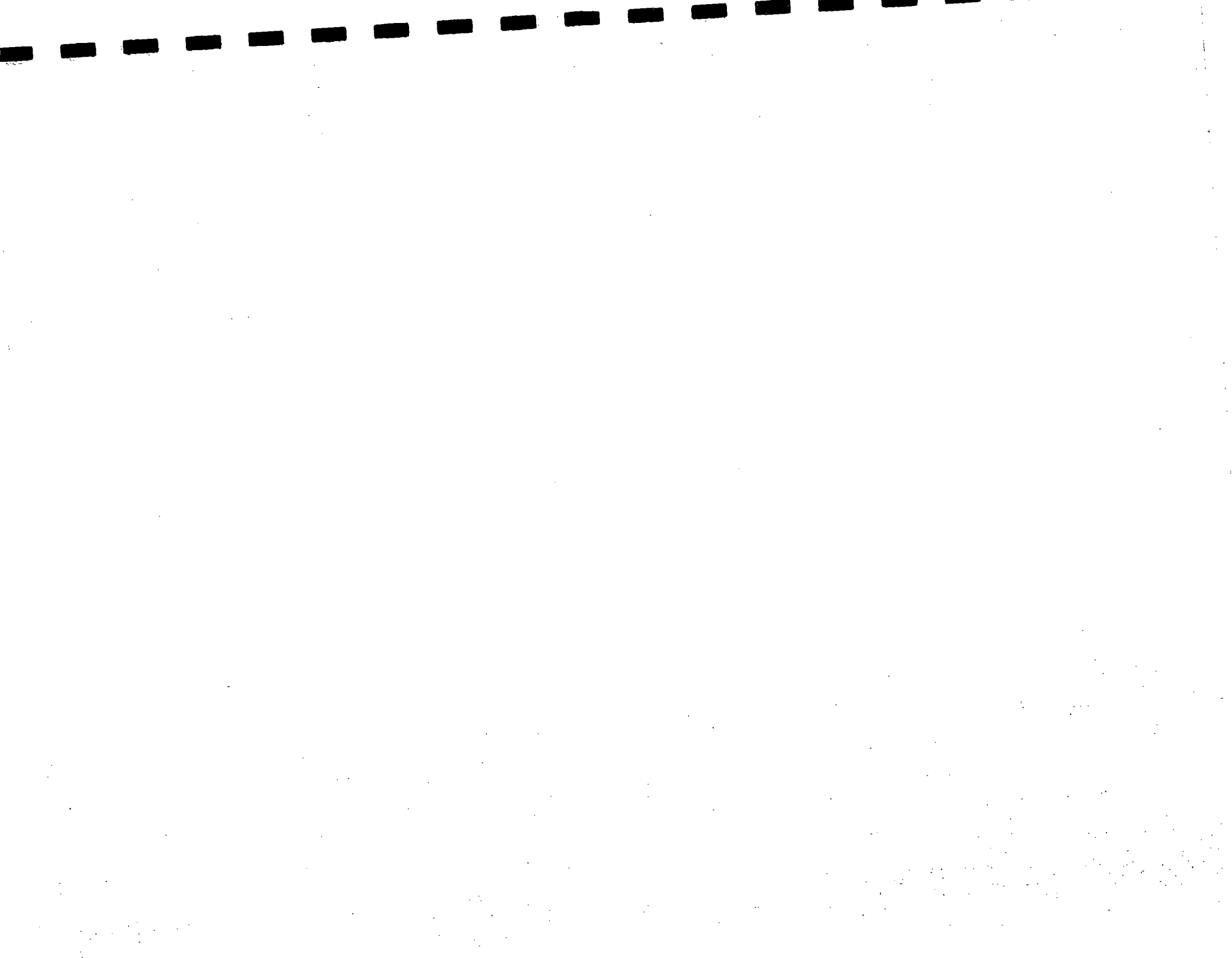
Others Present: John Naddy, Billy Giles, Michele Oertel

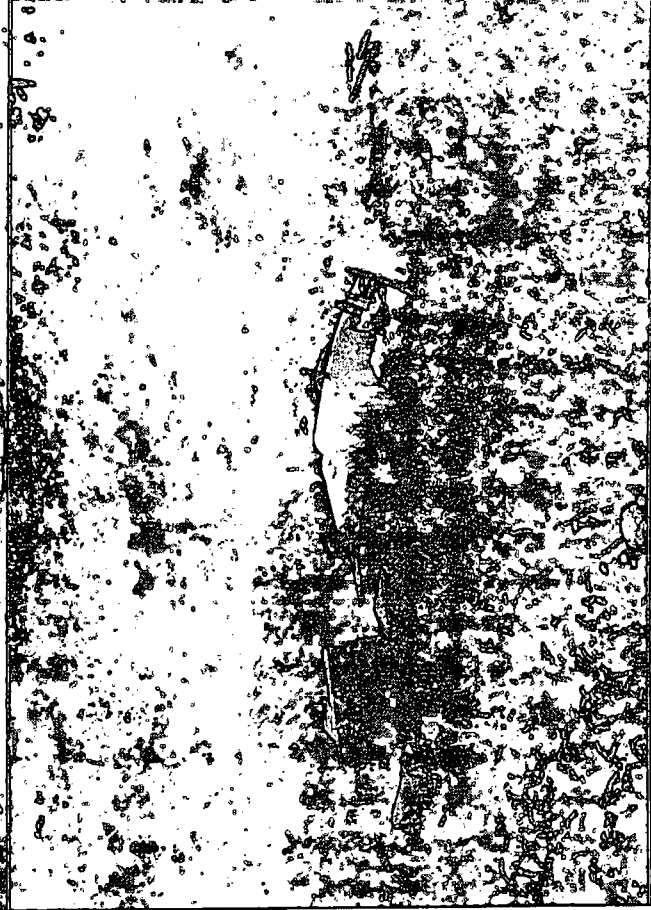
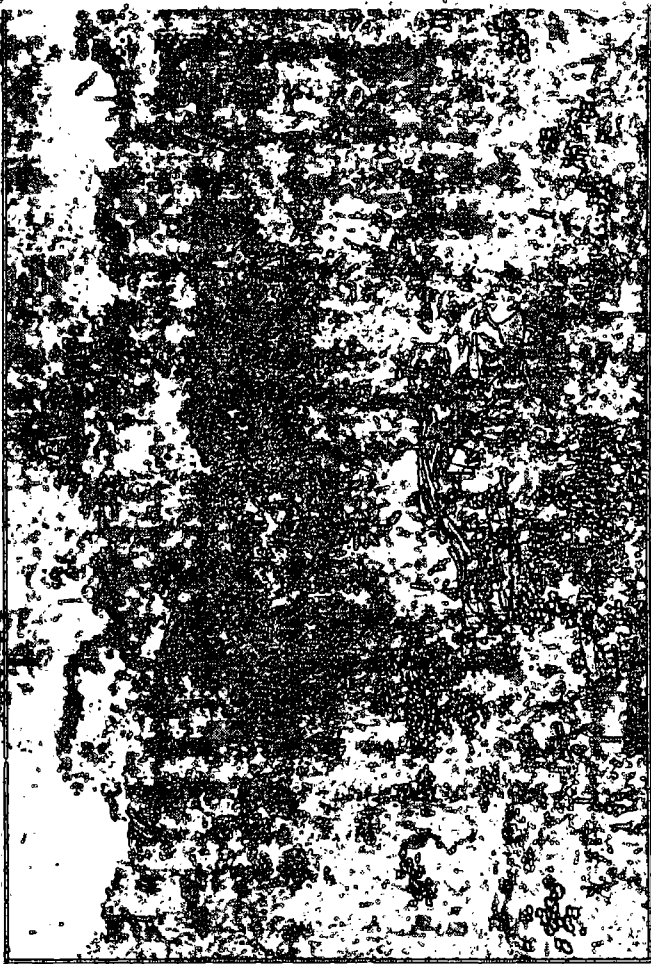
Location: Michigan City, LaPorte Co.

Subject (movement): Yard wastes and other debris

SF 39674

Dept. of Environmental Mgmt.





Volume 1000
Page 1000

Karwick Road Dump

Facility

Dana Reed Wise

7-23-92

3:50p

Photographer

Date

Time

Others Present: John Naddy, Billy Giles,

Michele Oertel

Location: Michigan City, LaPorte Co.

Subject (movement): Roofing material

SF 39674

Dept. of Environmental Mgmt.

Karwick Road Dump

Facility

John Naddy

7-23-92

4:00p

Photographer

Date

Time

Others Present: Dana Reed Wise, Billy Giles,

Michele Oertel

Location: Michigan City, LaPorte Co.

Subject (movement): old furniture and
other debris

SF 39674

Dept. of Environmental Mgmt.

Karwick Road Dump

Facility

John Naddy

7-23-92

3:55p

Photographer

Date

Time

Others Present: Dana Reed Wise, Billy

Giles, Michele Oertel

Location: Michigan City, LaPorte County

Subject (movement): Roofing and building
materials

SF 39674

Dept. of Environmental Mgmt.





TELEPHONE CALL REPORT

Date 8/27/92Time 3:00 pmFrom: Dana Reed WiseTo: Joseph Tite, EngineerSite Inv. SectionJoseph L. Tite, EngineeringSubject Discussed Kortwick Road DumpSummary

Joseph Tite was given this project by the city to construct a closure of patch for the waste exposed by Trail Creek at the above referenced site.

Action RequiredNoneDetails

IDNR inspected the site in 1990 and wanted the city to issue a permit for the landfill. Trail Creek had washed out part of the bank, exposing the wastes. He has developed a plan to secure the bank. The site was operated by National Solid, a company based in Fort Wayne, to operate the site as a municipal landfill. It was in operation from 1966-1971.

File in County LaPorte

Indiana State Board of Health
INSPECTION REPORT
Open Dumping

SM
MAM

Property location behind 715 Karwack Rd County La Porte
Date 6-30-86

Range _____ Township _____ Section _____ Site # _____

circle one

INVESTIGATION FINDINGS

1. Solid waste observed ☒ Yes ☐ No
2. Are flammable wastes present ☒ Yes ☐ No
3. Is access restricted ☒ Yes ☐ No
4. Is there evidence of burning on site ☐ Yes ☒ No
5. Are wastes being deposited in water (if yes, please explain) ☐ Yes ☒ No - low area
6. Approximate size of site ☐ less than 1/4 A ☒ more than 1/4 A

Property Owner:

Inspector's Signature(s):

Name William Cotton
Address 715 Karwack Rd
Michigan City, IN 46360

S. Schall

Comments/Observations According to Mr. Cotton, additional
cover material has been hauled in and spread.
There are still demolition and other wastes exposed.
The metal salvage pile is still on site. Additional
cover material needs to be applied.

Wm Cotton

Received by: _____ Date: _____ Time: _____



LaPorte County Health Department

SEP 21 8 58 AM '90

(219) 326-6808
(219) 879-9383

4th Floor — County Complex
Courthouse Square
LaPorte, IN 46350

OFFICE OF SOLID
AND HAZARDOUS
WASTE
DEPT

Mark A. Ballard, M.D.
Health Officer

September 17, 1990

Mr. James McCarty, General Manager and
Plant Superintendent
Michigan City Sanitary District
1100 E. 8th Street
P.O. Box 888
Michigan City, IN 46360

Dear Jim:

Our department received a complaint this week regarding an exposed fill at an old landfill along Trail Creek in the Michigan City East Quadrangle, Township 38 Range 4W Section 27 SE $\frac{1}{4}$, which records show is owned by the City of Michigan City.

Our files contain numerous old newspaper clippings which indicate this property north of Karwick Road, south of the South Shore Railroad and along the east bank of Trail Creek, was run as a landfill by the City of Michigan City in the 1960s.

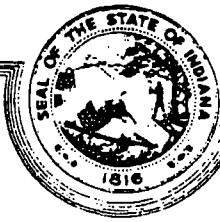
The complaint was verified by representatives from our department on September 11, 1990. The complaint is specifically that recent high water eroded soil along the east bank of Trail Creek in the area of the landfill and exposed old fill.

Our department urges Michigan City to immediately address this problem by stabilizing the bank to protect it from further erosion. We would caution against removing any of the existing fill due to its unknown content and its proximity to Trail Creek.

You should contact the Indiana Department of Natural Resources (IDNR), the Indiana Department of Environmental Management (IDEM), the United States Army Corps of Engineers (US ACOE) and any other regulatory branches to determine if this bank repair would require a permit and/or prior approval. In the event that an approval and/or permit process is required, hence causing a delay in the repair process, you should attempt an approved remedial repair to prevent further erosion.

Also, in an effort to prioritize the potential health threat posed by old landfills and/or dump sites in our county, the LaPorte County Health Department

STATE OF INDIANA



INDIANAPOLIS

STATE BOARD OF HEALTH

AN EQUAL OPPORTUNITY EMPLOYER

VIA CERTIFIED MAIL

Mr. William and Ms. Lessie Cotton
715 North Karwick Road
Michigan City, IN 46360

Address Reply to:
Indiana State Board of Health
1330 West Michigan Street
P. O. Box 1964
Indianapolis, IN 46206

Dear Mr. Cotton and Ms. Cotton:

Re: Open Dumping of Solid Waste
715 North Karwick Road
Michigan City
LaPorte County

On July 28, 1983, Mr. Stuart Miller of the Solid Waste Management Branch and Messrs. Don Warner and Gene Machota of the LaPorte County Health Department inspected the above-referenced site. The inspection revealed that open dumping is taking place on your property which is in violation of the Indiana Solid Waste Disposal Law, IC 36-9-30, and the Environmental Management Act IC 13-7. The site also is in violation of Federal criteria promulgated under the Resource Conservation and Recovery Act of 1976.

Therefore, all dumping must cease immediately and access to the site must be restricted. The solid waste presently on site shall be:

1. Collected and hauled to an approved sanitary landfill; or
2. Compacted and covered with a minimum of two feet of suitable cover soil, graded to prevent ponding of water and seeded to provide vegetation.

As mentioned to you by Mr. Miller, inert items as defined in Rule 320 IAC 5-9-1 are excluded from the regulation and may be deposited at this site. Inert items that may be dumped are concrete, dirt, stone, bricks, and concrete block. In addition, tree stumps and brush, although not defined as inert materials, may be deposited on-site. All other items such as wood demolition must be deposited at a permitted sanitary landfill. Please note that all exposed solid waste including the wood demolition must be covered with cover soil.

A reinspection will be made in approximately thirty (30) days to determine compliance.

If you have any questions about this action or about your obligation concerning this matter, please contact Mr. Stuart Miller or me at 317/633-0742.

Very truly yours,

Dan B. Magoun, Chief
Solid Waste Management Branch
Division of Land Pollution Control

SQM

cc: LaPorte County Health Department

Cotton 00
LaPorte Co.
7-28-83



tires, paper, cardboard, wood, metal



Metal Salvage



Foundary sand, demolition debris
wood glass

Indiana State Board of Health
INSPECTION REPORT
Open Dumping

Property location 715 N. Karwick Rd County LaPorte
Michigan City, IN 46360 Date 7-28-83
Range _____ Township _____ Section _____ Site # _____

circle one

INVESTIGATION FINDINGS

- | | | | |
|--|--------------------------------------|------|---|
| 1. Solid waste observed | <input checked="" type="radio"/> Yes | No | Items that can be dumped:
1. concrete
2. dirt
3. stone
4. bricks
5. tree stumps
6. concrete block
7. brush
<u>more than 1/4 A</u> |
| 2. Are flammable wastes present | <input checked="" type="radio"/> Yes | No | |
| 3. Is access restricted | <input checked="" type="radio"/> Yes | No | |
| 4. Is there evidence of burning on site | <input checked="" type="radio"/> Yes | No | |
| 5. Are wastes being deposited in water
(if yes, please explain) | Yes | ? No | |
| 6. Approximate size of site | less than 1/4 A | | |

Property Owner:

Name William + Lessie Cotton
Address 715 N. Karwick
Michigan City, IN 46360

Inspector's Signature(s):

STCMA
D. Hanner

Comments/Observations

This inspection was conducted with the LaPorte Co. Health Dept. to determine compliance with the regulations. This site was on fire approximately 1 1/2 months ago. This site is approx. 30-40 acres. Present on-site are tires, metal scrap, demolition, foundry sand, glass, metal etc. This site is in violation of the Indiana Solid Waste Disposal Law IC 36-9-30 and the Environmental Management Act IC 13-7. 3 pictures were taken.
The area being dumped on is sand.

A copy of this report was left with Mrs. Cotton.

Received by: _____ Date: _____ Time: _____

~~G. Halloran~~
LAND POLLUTION

File: ODI File
LaPorte Co.



Photo by Tim Zorn

County and state health officials inspect Cotton Brothers dump.

7-29-83

Restrictions placed on dump

Restrictions will be placed on the type of materials allowed in a Lakeland area dump, a State Board of Health inspector said yesterday.

The Cotton Brothers dump, east of Karwick Road and south of U.S. 12, was the scene last month of a fire that sent a pillar of smoke into the air.

Michigan City firefighters were at the scene of the June 22 fire for more than a day. Much of the smoke came from a burning pile of tires.

Yesterday, the dump was inspected by Stuart Miller, a field representative for the State Board of Health's land pollution control division.

Afterward, Miller said the Cotton Brothers site will be allowed to accept only inert materials, such as bricks, concrete, dirt, stone and brush.

He noted the sandy soil and the presence of standing water in some of the area excavated for dumping.

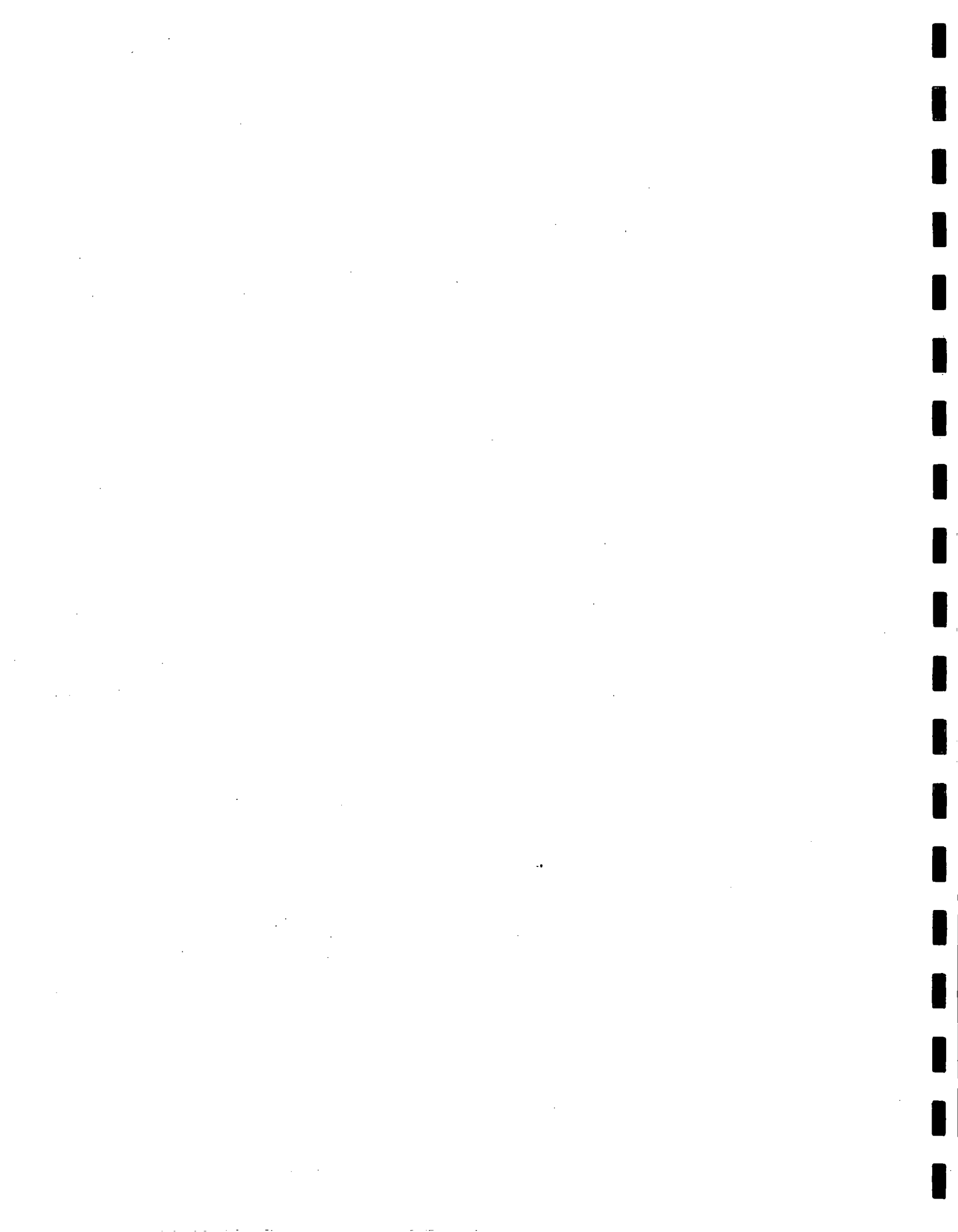
The owner, William Cotton, was not there when Miller inspected the site. He works at a Michigan City factory.

The dump has been largely inactive in recent years, Cotton's wife said.

Miller was accompanied in the inspection by LaPorte County Health Department sanitarians Gene Machota and Don Warner.

Afterwards, Miller talked to Mrs. Cotton about additional restrictions he will recommend.

Mich City N.D.
7-29-83





OPEN DUMP INSPECTION REPORT

State Form 42033 (12-87)

Department of Environmental Management
Office of Solid and Hazardous Waste Management
Solid Waste Management Branch

file 02A
LOW
sent 8/3/91

Inspection Type <input checked="" type="checkbox"/> Initial (INI) or <input type="checkbox"/> Follow-up (FOL)		Registrant Number	
Date 4-22-91	Time	County LaPorte	County Code 46
Area <input checked="" type="checkbox"/> North (N) or <input type="checkbox"/> South (S)	Inspected By S. Schaefer		
Site Location Karwick Rd. and Trail Creek site - near "sand bar" viaduct			
Property Owner's name Michigan City Sanitary District 40 Jim McCarty			
Property Owner's Address (Street or Rural Route) P.O. Box 888 532 Franklin Square			
City Michigan City	State IN	ZIP Code 46360	

INSPECTION FINDINGS		
	YES	NO
SOLID WASTE OBSERVED?		
ARE COMBUSTIBLE WASTES PRESENT?		
IS ACCESS RESTRICTED?		
IS THERE EVIDENCE OF BURNING ON SITE?		
ARE WASTES BEING DEPOSITED IN WATER?		

If YES to the last question, please explain:

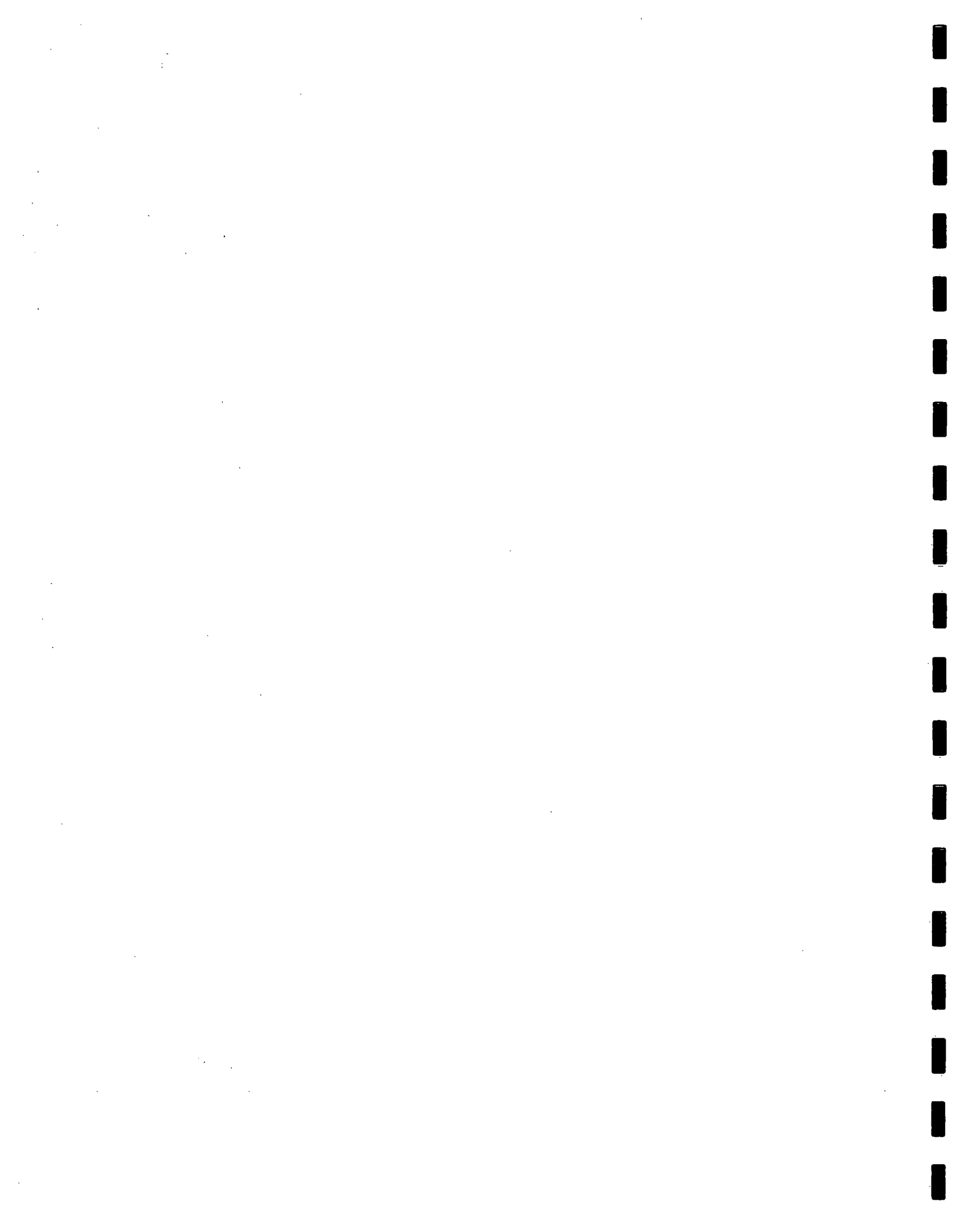
Approximate Size of Site:	<input type="checkbox"/> Less than 1/4 Acre	<input type="checkbox"/> More than 1/4 Acre	
Status	<input type="checkbox"/> Active (A)	<input type="checkbox"/> Inactive (I)	<input type="checkbox"/> Closed (C)
Compliance	IC	or	NC

Comments:

Our office received a request from State Dept of the DNR to check the site. The site is a closed landfill. Waters from Trail Creek have eroded away the bank, exposing some waste. There is also some leachate draining into Trail Creek.

A Construction via Floodway Permit from the DNR will probably be necessary to remediate the site. Speak with Mr. McCarty and Mr. Joe Titts who are working on the project.

Received By: <i>did not leave copy</i>

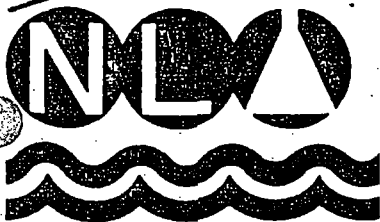




013384







NORTHERN LABORATORIES

A Division of Coast to Coast Analytical Services
ENVIRONMENTAL CONSULTING AND TESTING

AIR, WATER POLLUTION & SOLID WASTES - SAMPLING - ANALYSIS - CONSULTING

Telephone (219) 464-2389 FAX: 219-462-2953

2400 Cumberland Drive
Valparaiso, Indiana 46383

LABORATORY REPORT

CLIENT Michigan City Sanitary District DATE October 24, 1990
ATTENTION Mr. Donald Smales PHONE 1-874-7799
ADDRESS P.O. Box 888, Michigan City, IN 46360 DATE OF SAMPLE RECEIPT
SAMPLE COLLECTED BY M.H. September 28, 1990

NOTES: Samples taken by imbedding bottle in clay/soil channel and may have Picked up solids. Metals are not digested.

Northern Labs Sample ID: 6586-1 Client Sample ID: MCSD Wall 09/28/90

Analyte	Sample Type	Result	Detection Limit	Units	Method	Ana-lyst	Date of Analysis	Time of Analysis	QAQC Batch
Alkalinity	grab	1200	5.0	mg/L	310.1	NRT	10/10/90	1100	6213
Ammonia	grab	160	0.10	mg/L	350.1	APB	09/28/90	1604	5480
BOD5	grab	176	2.0	mg/L	405.1	GV	09/28/90	1900	5807
COD	grab	97	2.0	mg/L	410.1	JSZ	10/11/90	1230	6399
Chloride	grab	110	1.0	mg/L	325.2	NRT	10/02/90	1442	5643
Hardness	grab	440	5.0	mg/L	130.2	NRT	10/12/90	1230	6623
Nitrate-Nitrite-N	grab	0.14	0.02	mg/L	353.2	AFB	09/28/90	1500	5452
Specific Conducta	grab	3500	0.1	mg/L	120.1	AC	10/04/90	1100	5792
Sulfate	grab	11	5.0	mg/L	375.2	AFB	10/08/90	1159	6034
TDS	grab	910	5	mg/L	160.1	DJ	10/01/90	1310	5737
TKN	grab	210	0.10	mg/L	351.2	NRT	10/12/90	0921	6554
pH	grab	6.8	NA	S.U.	150.1	TS	09/28/90	1453	5474
PCB's	grab	ATTACHED	0.01	mg/L	608	AFB	07/03/90		
Arsenic	grab	0.019	0.010	mg/L	206.2	CHH	10/09/90	22:30	6266
Mercury	grab	0.002	0.001	mg/L	245.1	BJ	10/06/90	11:48	5971
Barium	grab	0.79	0.005	mg/L	200.7	SB	10/02/90	13:31	5656
Cadmium	comp	0.022	0.005	mg/L	200.7	SB	10/02/90	13:31	5648
Chromium	grab	0.095	0.01	mg/L	200.7	SB	10/02/90	13:31	5649
Copper	grab	0.18	0.01	mg/L	200.7	SB	10/02/90	13:31	5650
Iron	grab	210	0.05	mg/L	200.7	SB	10/02/90	13:31	5655
Lead	grab	0.21	0.05	mg/L	200.7	SB	10/02/90	13:31	5651
Nickel	grab	0.12	0.005	mg/L	200.7	SB	10/02/90	13:31	5652



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SAMPLE COLLECTED BY M.H. September 28, 1990

NOTES: Samples taken by imbedding bottle in clay/soil channel and may have Picked up solids. Metals are not digested.

Northern Labs Sample ID: 6586-1

Client Sample ID: MCSD Wall

09/28/90

Analyte	Sample Type	Result	Detection Limit	Units	Method	Ana-lyst	Date of Analysis	Time of Analysis	QA/QC Batch
Zinc	grab	0.95	0.01	mg/L	200.7	SB	10/02/90	13:31	5654

Approved By

Adrienne Byrnes

QA Officers Statement: Duplicate for NL difference < 2 X MDL



TELEPHONE CALL REPORT

Date 8 / 26 / 92Time 2:30pmFrom: Barbara RudzikTo: Jim McCarty, Gen. Mgr.Site Dev. SectionRich City Sanitary Dist.Subject Discussed Karwick Road DumpSummary

Mr. McCarty was called to obtain information on the Karwick Road Dump

Action Required

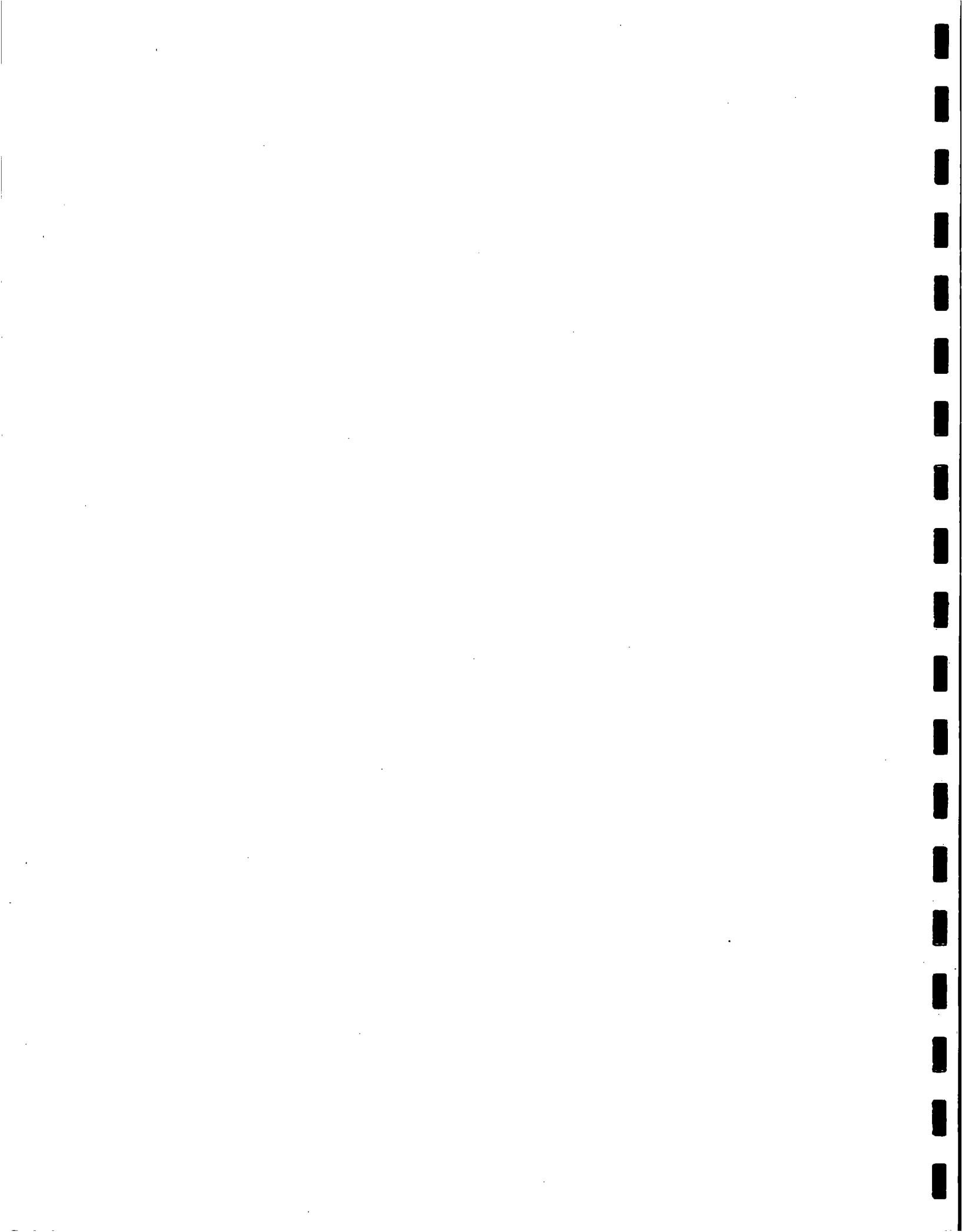
None

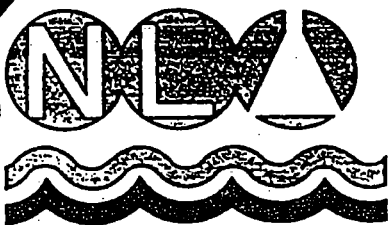
Details

Dump

The Karwick Road was an unpermitted landfill used for municipal waste, construction debris and other solid waste. It has also been used as an open dump by local residents. The problem occurred when water from Trout Creek eroded the bank of the dump, ~~eroding~~ exposing waste and causing waste to enter the creek. Samples were taken from a leachate well, but no contaminants of concern were detected.

File in County Reports





NORTHERN LABORATORIES
A Division of Coast to Coast Analytical Services
ENVIRONMENTAL CONSULTING AND TESTING

Lab Number: 6586-1
Collected: 09/28/90
Received: 09/28/90
Extracted: 10/09/90
Tested: 10/17/90
Sample Volume/Weight: 1000 ml
Final Volume: 1 ml
Collected by: Michigan City Sanitary District

Michigan City Sanitary District
Post Office Box 888
Michigan City, IN 46360

SAMPLE DESCRIPTION: Aqueous

PCB'S by EPA METHOD 608/8080
Extracted by EPA Method 3510
Clean-up by EPA Method 3620

Compound Analyzed	Detection Limit (PQL)* micrograms/L	Concentration ug/L
PCB 1016	0.5	not detected
PCB 1221	0.5	not detected
PCB 1232	0.5	not detected
PCB 1242	0.5	not detected
PCB 1248	0.5	not detected
PCB 1254	0.5	not detected
PCB 1260	0.5	not detected

SURROGATE STANDARD: Dibutyl Chlorendate SS 48% Recovery

Amount Added: 2 ug
Amount Recovered: 96 ug

*(Practical Quantitation Limit)

Compounds reported as "not detected" would have been reported if present at or above the listed detection limit.

Respectfully submitted,
NORTHERN LABORATORIES

John Mac Murphy
John Mac Murphy
Manager of Organic Chemistry

ECD1
10/22/90
65861PCB.wrl #3
JMM/AA/re

2400 CHAMBERLAND DR. VALPARAISO, INDIANA 46383 PHONE: 219-462-2953 FAX: 219-462-2953

Steve Schader
please investigate

THRU: Skip Powers 3/25
Bob Moran 3/22

TO: ~~Stewart Miller~~, Section Chief
Solid Waste Section
OSHW/M

FROM: JOHN A. KASSIS
EMERGENCY RESPONSE

SUBJECT: Michigan City Sanitary District Landfill Eroding into Trail Creek

MESSAGE: This landfill, termed "Carwick Road", has an eroded face exposing debris on the east bank of Trail Creek. In Sept. 1990, a temporary clay "patch" was placed onto the bank to stop the erosion. On 3-12-91, Mr. Davis (IDNR) was requested to document the situation and report back to his office. The "Save The Dunes" environmental group has knowledge of this situation. In light of this, may I request

SIGNED: an inspector contact both Mr. Davis & Mr. McCarthy to set up a meeting to further investigate the remediation that needs to occur at this site. Please copy me any reports generated for ER files. Thanks for your cooperation.

REPLY

FOLLOW-UP DATE	REMOVE PART 2 AND FORWARD PARTS 1 AND 3 PART 3 WILL BE RETURNED WITH REPLY	SIGNED	DATE
		John A. Kassis	3-18-91

081 A W22-SS-3 State Form No. 1352

MATERIAL INFORMATION							
<input type="checkbox"/> 1 Petroleum Product	<input type="checkbox"/> 3 Misc Chemical	<input type="checkbox"/> 5 Agricultural Related Product	<input checked="" type="checkbox"/> 7 Other 72				
<input type="checkbox"/> 2 Acid/Base	<input type="checkbox"/> 4 Misc Material	<input type="checkbox"/> 6 Food Related Product	<input type="checkbox"/> 8 Unknown				
Material Name(s): 1 Solid Waste Debris		Phase G L S <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Quantity UNKNOWN	Lb Gal			
2		Phase G L S <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Quantity	Lb Gal			
CHEMICAL AND PHYSICAL CHARACTERISTICS		TLV	STEL	IDLH			
Specific Gravity	Flash Point F°	LEL	UEL	Color	Odor		
Reportable Quantity Lb	Other Information						
CIRCUMSTANCES				ENVIRONMENTAL CONSEQUENCES			
<input type="checkbox"/> 1 Equipment Failure	<input type="checkbox"/> 5 Intentional Discharge	<input type="checkbox"/> 1 Water Quality Violation	<input checked="" type="checkbox"/> 5 Undetermined				
<input type="checkbox"/> 2 Transportation Accident	<input checked="" type="checkbox"/> 6 Miscellaneous	<input type="checkbox"/> 2 No Water Quality Violation	<input type="checkbox"/> 6 Air Release				
<input type="checkbox"/> 3 Employee Error	<input type="checkbox"/> 7 Unknown	<input type="checkbox"/> 3 Fish Kill	<input type="checkbox"/> 7 Minimal - LOG ONLY				
<input type="checkbox"/> 4 Vandalism		<input type="checkbox"/> 4 FK & WQ Violation					

INITIAL INCIDENT REPORT LOG

Emergency Response Branch

State Form 13490 (R2/ 8-89)

Indiana Dept. of Environmental Management
P. O. Box 6015
Indianapolis, Indiana 46206
24 Hr Emergency Reporting Number
317/241-4336

<input type="checkbox"/> 1 SPILL	<input type="checkbox"/> 4 AIR	INCIDENT NO.	9103079
<input type="checkbox"/> 2 FISH KILL	<input checked="" type="checkbox"/> 5 HAZ/MAT	CITY	MICHIGAN City 04
<input type="checkbox"/> 3 RADIATION	& OTHER	COUNTY	LAPORTE 46
MINOR <input checked="" type="checkbox"/>	SIGNIFICANT <input type="checkbox"/>	SEVERE <input type="checkbox"/>	TITLE III REPORT?
Initial Only <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
INVESTIGATOR		JOHN A. KASSIS	

REPORTING INFORMATION

Incident Date 09/10/90	Incident Time AM PM	Notification Date 3/15/91	Notification Time 1030 AM PM
Suspected Responsible Party MICHIGAN City Sanitary District		Reported By/ Title Elise Bittner, Journalist	
Contact / Title Jim McCarty, General Manager		Organization MICHIGAN City Dispatch	
Address P.O. Box 988 532 Franklin Square		Address	
City / State / Zip Code MICHIGAN City, In. 46360	Phone # 873-1525	City / State / Zip Code	Phone # 202-1662-1811

REPORTED BY

<input type="checkbox"/> 1 Responsible Pty	<input type="checkbox"/> 5 County Health Department
<input type="checkbox"/> 2 Fed Gov't Agency	<input checked="" type="checkbox"/> 6 DNR/ Conservation Officer
<input type="checkbox"/> 3 State Gov't Agency	<input type="checkbox"/> 7 State or Local Police
<input type="checkbox"/> 4 Local Gov't Agency	<input checked="" type="checkbox"/> 8 Private Citizen <input type="checkbox"/> 9 Other

INVESTIGATION PERFORMED BY

<input type="checkbox"/> 1 DEM - Emer Resp Branch	<input type="checkbox"/> 5 US EPA
<input checked="" type="checkbox"/> 2 Other DEM Personnel	<input type="checkbox"/> 6 Other ()
<input checked="" type="checkbox"/> 3 DNR/ Conservation Officer	<input type="checkbox"/> 7 DEM-ERB Field Resp.
<input type="checkbox"/> 4 County Health Department	

SOURCE

<input type="checkbox"/> 1 Transportation RR	<input type="checkbox"/> 4 Transportation Barge	<input type="checkbox"/> 7 Commercial	<input type="checkbox"/> 10 Unknown	<input type="checkbox"/> 13 LUST
<input type="checkbox"/> 2 Transportation Truck	<input type="checkbox"/> 5 Industrial	<input type="checkbox"/> 8 Semi-Public	<input type="checkbox"/> 11 Other ()	
<input type="checkbox"/> 3 Transportation Pipeline	<input type="checkbox"/> 6 Agricultural	<input checked="" type="checkbox"/> 9 Municipal	<input type="checkbox"/> 12 Individual	

SPILL LOCATION INFORMATION

Location (Address or Directions) Michigan City East Quad: Section 27, Township 38 North, Range 4 West (S.E. 1/4)	
Area UNKNOWN	Sq Ft Miles Site / Area Description Dump erosion on East Bank
Water Involved ? / Name <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No TRAIL CREEK	Downstream Water Users

MATERIAL INFORMATION

<input type="checkbox"/> 1 Petroleum Product	<input type="checkbox"/> 3 Misc Chemical	<input type="checkbox"/> 5 Agricultural Related Product	<input checked="" type="checkbox"/> 7 Other 72
<input type="checkbox"/> 2 Acid/Base	<input type="checkbox"/> 4 Misc Material	<input type="checkbox"/> 6 Food Related Product	<input type="checkbox"/> 8 Unknown
Material Name(s) 1 Solid Waste Debris		Phase G L S Quantity UNKNOWN	Lb Gal
2		Phase G L S Quantity	Lb Gal
CHEMICAL AND PHYSICAL CHARACTERISTICS		TLV	STEL
Specific Gravity	Flash Point F°	LEL	IDLH
Reportable Quantity	Other Information	UEL	Color
Lb			Odor

CIRCUMSTANCES

<input type="checkbox"/> 1 Equipment Failure	<input type="checkbox"/> 5 Intentional Discharge
<input type="checkbox"/> 2 Transportation Accident	<input checked="" type="checkbox"/> 6 Miscellaneous
<input type="checkbox"/> 3 Employee Error	<input type="checkbox"/> 7 Unknown
<input type="checkbox"/> 4 Vandalism	

ENVIRONMENTAL CONSEQUENCES

<input type="checkbox"/> 1 Water Quality Violation	<input checked="" type="checkbox"/> 5 Undetermined
<input type="checkbox"/> 2 No Water Quality Violation	<input type="checkbox"/> 6 Air Release
<input type="checkbox"/> 3 Fish Kill	<input type="checkbox"/> 7 Minimal - LOG ONLY
<input type="checkbox"/> 4 FK & WQ Violation	

U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

A0000101113462

CENSUS '90

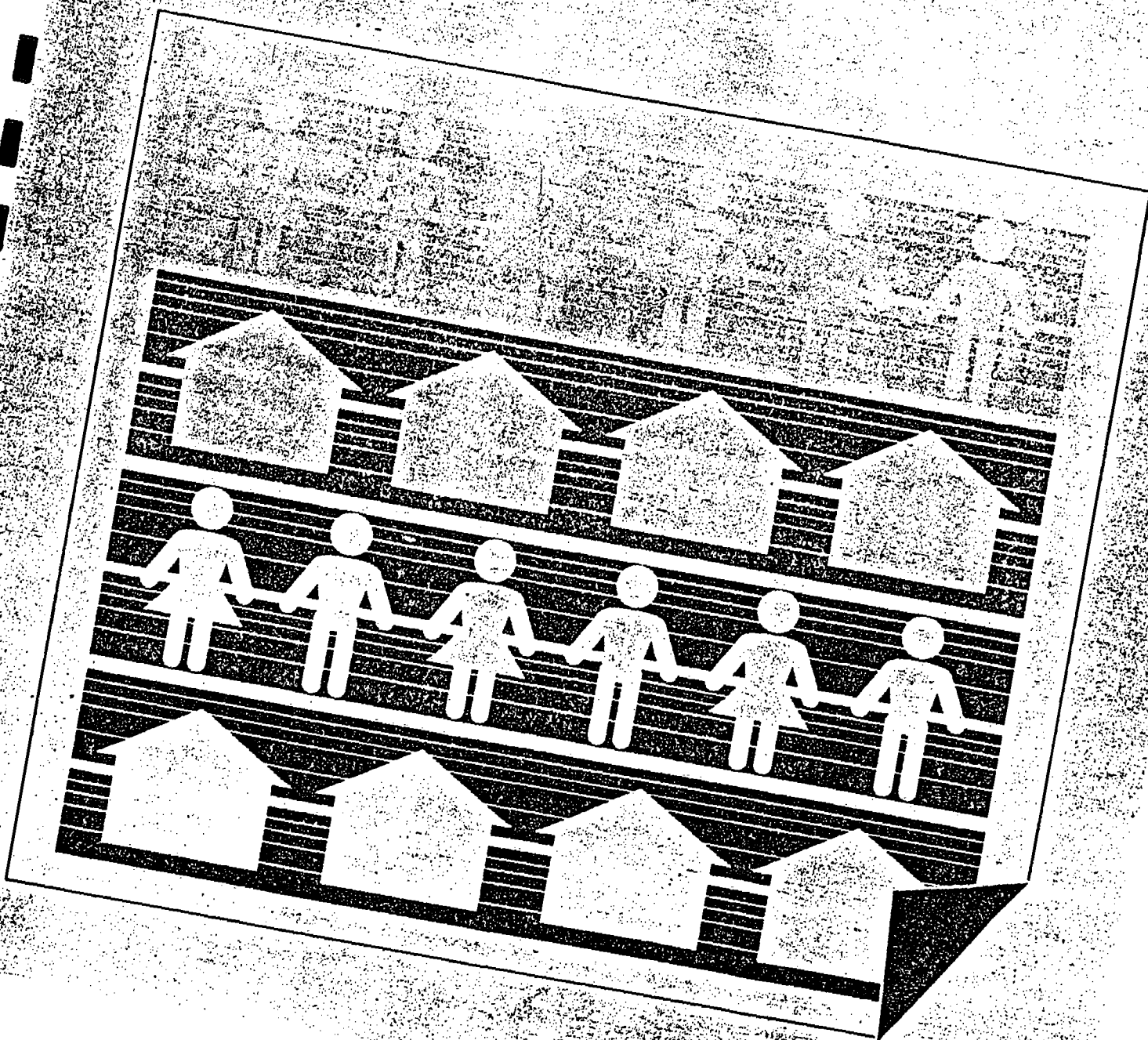


1990 CPH-1-16

1990 Census of
Population and Housing
Summary Population and
Housing Characteristics

Indiana

Indiana State Data Center
Indiana State Library
140 N. Senate Avenue
Indpls., In 46204



SOIL SURVEY OF La Porte County, Indiana

**United States Department of Agriculture
Soil Conservation Service
in cooperation with
Purdue University Agricultural Experiment Station
and the
Indiana Department of Natural Resources, Soil and Water Conservation Committee**





KEY TO MAP

500-Year Flood Boundary

100-Year Flood Boundary

Zone Designations* With
Date of Identification
12/2/74

500-Year Flood Boundary

500-Year Flood Boundary

Base Flood Elevation Line
With Elevation In Feet**

Base Flood Elevation in Feet
Where Uniform Within Zone**

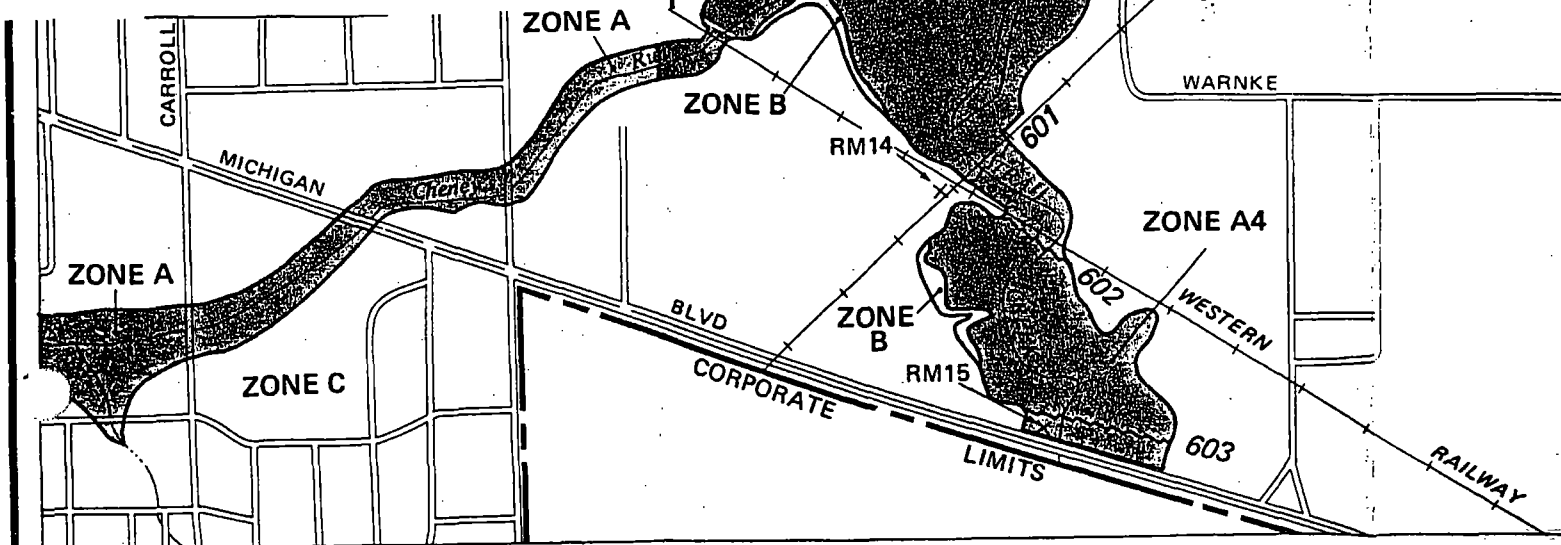
Elevation Reference Mark

River Mile

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.





WMN 616225
WME 512780



WATER WELL RECORD

State Form 35680

WELL LOCATION (Fill in completely)

County where drilled

LAPORTE

Civil Township

TRAIL CREEK

Driving directions to the well location (Include county road names, numbers, subdivisions, lot number with consideration to intersecting roads and trip origin-
tion) There is space for a map on reverse side.

US Hwy 20 to Mich Blvd

Left on Menke Rd.

1/2 m. on right

38N - 4W Sec 35

CONSTRUCTION DETAILS

Type of well:

☒ Drilled ☒ Gravel pack ☐ Driven ☐ Other

Use of well:

☐ Home ☐ Industry ☐ Test ☒ Irrigation

☐ Public supply ☐ Stock ☐ Other (specify)

Method of drilling:

☐ Cable tool ☒ Rotary ☐ Jet ☐ Rev. rotary ☐ Bucket rig

Casing length

45 feet

Diameter

6

inches

Screen length

10 feet

Diameter

4

inches

Screen slot size

12

Depth of pump setting

36'

Type of pump

☒ Submersible ☐ Shallow-
well jet ☐ Deep-well
jet ☐ Other
(specify)

WELL CAPACITY TEST

(Check one)

☐ Bailing ☒ Pumping

Test rate

98

gpm

6

hrs

Drawdown

26

feet

Static level

(depth to water)

20

feet

Water quality (clear, cloudy, odor, etc.)

clear

Mail completed record within 30 days to:

DIVISION OF WATER

INDIANA DEPARTMENT OF NATURAL RESOURCES

605 STATE OFFICE BUILDING

INDIANAPOLIS, INDIANA 46204

PHONE (317) 232-4160

OWNER - CONTRACTOR

Well owner

Address

200 Menke Rd. Mich

Building contractor

Address

Drilling contractor

Henrich Well

Address

8657 N. 600 W.

Equipment operator

Tim Henrich

Completion date

9/30/83

U.S. 35

WELL LOG

Formations: type of material

From

To

surface water sand

0 ft.

14 ft.

clay & sand

14

22

clay

22

30

gravel & sand

30

55

clay

55

—

(Additional space for Well Log on reverse side)

Signed

Tim Henrich

Date

9/30/83

(Well driller does not fill out)

FC
mc

County	Laporte	Twp.	38 N	Rge.	4 W	SE ¼ NE ¼ SW	Sec.	35
Topo map	Mich. City E 7 in			Ft. W of EL		Ground elevation		Subdivision name
Field located								
By	WH	Date	6/6/87	1850	Ft. N of SL	Depth to bedrock		Lot no.
Courthouse location								
By		Date		2450	Ft. E of WL	Bedrock elevation		
Location accepted w/o verification by					Ft. S of NL	Aquifer elevation		

Verified by organ

(Continued from front side)

[illegible]

Locate with reference to highways, intersecting county roads, and distinctive landmarks.

WELL NO LONGER USED,
LOCATED ABOUT 12' W OF
PUMP HOUSE

W

E

1

UTMA 616 725
UTME 512 250



WATER WELL RECORD

State Form 35680

WELL LOCATION (Fill in completely)

County where drilled

LAPORTE

Civil Township

TRAIL CREEK

Driving directions to the well location (Include county road names, numbers, subdivisions, lot number with consideration to intersecting roads and trip origination) There is space for a map on reverse side.

US HWY 20. to Mich BLVD.
Head North 1/2 mile across
C&O R.R. tavern on left
across from car dealer

38N-4W Sec 35

CONSTRUCTION DETAILS

Type of well:

☒ Drilled ☒ Gravel pack ☐ Driven ☐ Other

Use of well:

☐ Home ☐ Industry ☐ Test ☐ Irrigation

☐ Public supply ☐ Stock ☐ Other (specify) tavern

Method of drilling:

☐ Cable tool ☒ Rotary ☐ Jet ☐ Rev. rotary ☐ Bucket rig

Casing length

110

feet

Diameter

4

inches

Screen length

15

feet

Diameter

4

inches

Screen slot size

12

Depth of pump setting

100'

Type of pump

☒ Submersible ☐ Shallow-well jet ☐ Deep-well jet ☐ Other (specify)

WELL CAPACITY TEST

(Check one)

☐ Bailing ☒ Pumping

Test rate

30

gpm

2

hrs

Drawdown

20'

feet

Static level

(depth to water)

15

feet

Water quality (clear, cloudy, odor, etc.)

clear

Mail completed record within 30 days to:

DIVISION OF WATER
INDIANA DEPARTMENT OF NATURAL RESOURCES
605 STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46204
PHONE (317) 232-4160

OWNER - CONTRACTOR

Well owner

DANIEL BOOTCHECK

Address

3015 E. Mich Blvd MCIN

Building contractor

Address

Drilling contractor

Henrich Well

Address

8657 N. 600 W. MC Ind

Equipment operator

Tim Henrich

Completion date

10/8/83

WELL LOG

Formations: type of material

From

To

SAND & GRAVEL

0 ft.

8 ft.

SURFACE WATER

8

12

BLUE CLAY

12

75

BLUE CLAY & FINE SAND

75

97

BLACK SHALE

97

105

gray water sand

105

135

SHALE

135

—

(Additional space for Well Log on reverse side)

Signed

Tim Henrich

Date

10/22/83

(Well driller does not fill out)

FC
MC

County	Twp.		Rge.	Sec.	
Lapeere	38N		4W	NW ¼ SW ¼ NW 35	
Topo map	Ground elevation		Subdivision name		
Michigan City E7½	622				
Field located	Depth to bedrock		Lot no.		
By MHL Date 7/6/87	+135				
Courthouse location	Bedrock elevation				
By Date	525				
	+ 487				
Location accepted w/o verification by	Aquifer elevation				
	487				

VERIFIED BY SIGN

(Continued from front side)

[illegible]

Locate with reference to highways, intersecting county roads, and distinctive landmarks.

[illegible]

UTM 617095
TIME 571235

DIVISION OF WATER
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA
STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46204
Telephone 633-5267 Area Code 317

State Form 35680

3

WATER WELL RECORD

WELL LOCATION

(Fill in completely - Refer to instruction sheet)

County in which well was drilled LAPORTE Civil Township COOL SPRING

Driving directions to the well location: Include County Road Names, Numbers, Subdivision Name, lot number, distinctive landmarks, etc.

TAKE US 20 & 35 INTO MICHIGAN CITY CORNER
OF MICHIGAN ST. & RISKIE AVE.

NAME OF WELL OWNER and/or BUILDING CONTRACTOR

Well Owner CITIZEN'S BANK Address MICHIGAN CITY

Building Contractor _____ Address _____

Name of Well Drilling Contractor: HUNTS, INC.

Address ROLLING PRAIRIE

Name of Drilling Equipment Operator: JOE BENNETT

WELL INFORMATION

Depth of well: 18'

Date well was completed: 5-29-80

Diameter of casing or drive pipe: 2" Total Length: 18'

Diameter of liner (if used): _____ Total Length: _____

Diameter of Screen: 1 1/4" Length: 3'

Slot Size: 7 PLASTIC

Type of Well: Drilled ☐ Gravel Pack ☐ Driven ☒ Other _____

Use of Well: For Home ☐ For Industry ☐ For Public Supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☒ Bucket Rig ☐

Static water level in completed well (Distance from ground to water level) 8' feet

Bailer Test: Hours Tested _____ Rate _____ g.p.m. Drawdown _____ ft.

(Drawdown is the difference between static level and water level at end of test)

Pumping Test: Hours Tested _____ Rate _____ g.p.m. Drawdown _____ ft.

Signature

Joe Bennett

Date

5-30-80

FL
me



VERIFIED BY SIGN

WATER WELL LOG



616725
511 075
DIVISION OF WATER RESOURCES
INDIANA DEPARTMENT OF CONSERVATION
311 WEST WASHINGTON STREET
INDIANAPOLIS, INDIANA

WATER WELL RECORD

INFORMATION ON WELL LOCATION

County in which well was drilled: LaPort Civil Township: Michigan

Congressional township: _____ Range: _____ Number of section: _____

(Fill in as completely as possible)

Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks: On Plum St off of Johnson Rd

about one block to the right hand side.

EL

Name of owner: Joseph M. Faldenauer Address: 213 Plum Ter

Name of Well Drilling Contractor: Lakeland Pump & Well

Address: _____

Name of Drilling Equipment Operator: Ronald W. Doran

INFORMATION ON THE WELL

Completed depth of well: 26 ft. Date well was completed: 4/25/64

Diameter of outside casing or drive pipe: 2 in Length: 18 ft.

Diameter of inside casing or liner: _____ Length: _____

Diameter of Screen: 1 1/4" Length: 3' Slot size: _____

Type of Well: Drilled ☒ Gravel Pack ☐ Driven ☐ Other _____

Use of Well: For home ☒ For industry ☐ For public supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☒ Driven ☐

Static water level in completed well (Distance from ground to water level) _____ ft.

Bailer Test: Hours tested _____ Rate _____ g.p.m. Drawdown _____ ft. (Difference between

Pumping Test: Hours tested _____ Rate _____ g.p.m. Drawdown _____ ft. static level and water

level at end of test)

Signature Ronald W. Doran

Date 4/25/64

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET

④

FOR ADMINISTRATIVE USE ONLY
(Well Driller does not fill out)

3

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W
D



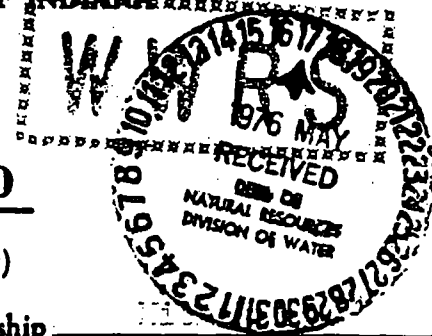
UTMA 616725

UTME 511360

⑤
Lm-8

DIVISION OF WATER
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA
STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46204
Telephone 633-5267 Area Code 317

WATER WELL RECORD



WELL LOCATION

(Fill in completely - Refer to instruction sheet)

County in which well was drilled LaPorte Civil Township LaPorte

Driving directions to the well location: Include County Road Names, Numbers, Subdivision Name, lot number, distinctive landmarks, etc.

Take 421 North to Greenwood Avenue/ East on Greenwood to Sarah-JO Street.

Left on Sarah-JO to deadend (approx. 2 blocks).

NAME OF WELL OWNER and/or BUILDING CONTRACTOR

Well Owner Trail Creek Town Address Trail Creek

Building Contractor Delco, Inc. Address 2720 E. Michigan Blvd., Michigan City

Name of Well Drilling Contractor: Beach Plumbing & Well Drilling Co., Inc.

Address 1272 Horse Prairie Avenue, Valparaiso

Name of Drilling Equipment Operator: W. P. Kent

WELL INFORMATION

Depth of well: 23' Date well was completed: 4-21-76

Diameter of casing or drive pipe: 2" Galv. Total Length: 25'

Diameter of liner (if used): _____ Total Length: _____

Diameter of Screen: 1 1/2" Length: 5' Slot Size: 2-Slot Nylon

Type of Well: Drilled ☒ Gravel Pack ☐ Driven ☐ Other _____

Use of Well: For Home ☐ For Industry ☐ For Public Supply ☒ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☒ Bucket Rig ☐

Static water level in completed well (Distance from ground to water level) 20 feet

Bailer Test: Hours Tested _____ Rate _____ g.p.m. Drawdown _____ ft. (Drawdown is the difference between static level and water level at end of test)

Pumping Test: Hours Tested _____ Rate _____ g.p.m. Drawdown _____ ft.

Longer Pumped: 13 g.p.m.

Signature Don J. Kalan

Date 4-22-76

Subdivision Name

1950年10月1日

1900 Ft S of NL. Aquifer elevation 598 Lot Number _____

→ VERIFIED BY CUSTODIAN

WATER WELL LOG

[illegible]

SYN-616 050
TIME 511 995

DIVISION OF WATER
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA
STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46204
Telephone 633-5267 Area Code 317

State Form 35680

WATER WELL RECORD

WELL LOCATION

(Fill in completely - Refer to instruction sheet)

County in which well was drilled La Porte Civil Township Coaling

Driving directions to the well location: Include County Road Names, Numbers, Subdivision Name, lot number, distinctive landmarks, etc.

TAKE U.S. 30 WEST OF ROLLING PRAIRIE TO
Johnson Road to Whippoorwill Drive to 1st corner
Oakland Dr. House is on southwest corner of the
intersection

NAME OF WELL OWNER and/or BUILDING CONTRACTOR

Well Owner M.A. Raltke Address 230 Oakland Dr. Mich City

Building Contractor _____ Address _____

Name of Well Drilling Contractor: Hunts Inc.

Address Rolling Prairie, Indiana

Name of Drilling Equipment Operator: George Senna

WELL INFORMATION

Depth of well: 22' Date well was completed: April 22, 1980

Diameter of casing or drive pipe: 2" Total Length: 18'

Diameter of liner (if used): _____ Total Length: _____

Diameter of Screen: 1 1/4 Length: 4' Slot Size: .010 glass

Type of Well: Drilled ☐ Gravel Pack ☐ Driven ☒ Other _____

Use of Well: For Home ☒ For Industry ☐ For Public Supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☒ Bucket Rig ☐

Static water level in completed well (Distance from ground to water level) 10 feet

Bailer Test: Hours Tested _____ Rate _____ g.p.m. Drawdown _____ ft.

Pumping Test: Hours Tested _____ Rate _____ g.p.m. Drawdown _____ ft.

(Drawdown is the difference between static level and water level at end of test)

Signature George Senna

Date April 24, 1980

(Well driller does not fill out)

Topo Map Michigan City E 7 1/2

Field Located By MM Date 7/10/87

Courthouse Location By _____ Date _____

Location accepted w/o verification by _____

250 Ft W of EL.

1250 Ft N of SL.

_____ Ft E of WL.

_____ Ft S of NL.

Ground Elevation 623

Depth to bedrock_____

Bedrock elevation_____

Aquifer elevation 599

Subdivision Name

Lot Number _____

WATER WELL LOG

[illegible]



DIVISION OF WATER
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA
STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46209



WATER WELL RECORD

INFORMATION ON WELL LOCATION

County in which well was drilled: LaPorte Civil Township: Trail Creek

Congressional township: _____ Range: _____ Number of section: _____

(Fill in as completely as possible)

Describe in your own words the well location with respect to nearby towns, roads, streets or distinctive landmarks: 1/8 mile off of Michigan Avenue on Johnson Road,
on East side of road . North of LaPorte, IN

Name of owner: Anderson Construction Address: 9923W 499S
LaPorte, IN 46350

Name of Well Drilling Contractor: Dye Plumbing and Heating LaPorte, IN 46350

Address: 712 Madison P.O. Box 1557

Name of Drilling Equipment Operator: Dan Buss

INFORMATION ON THE WELL

Completed depth of well: 22' ft. Date well was completed: 6/10/78

Diameter of outside casing or drive pipe: 2" Length: 18'

Diameter of inside casing or liner: _____ Length: _____

Diameter of Screen: 1" Length: 4' Slot size: 80 gauge

Type of Well: Drilled ☐ Gravel Pack ☐ Driven ☒ Other _____

Use of Well: For home ☒ For industry ☐ For public supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☐ Driven ☒

Static water level in completed well (Distance from ground to water level) 9' ft.

Bailer Test: Hours tested _____ Rate _____ g.p.m. Drawdown _____ ft. (Difference between static level and water level at end of test)

Pumping Test: Hours tested _____ Rate _____ g.p.m. Drawdown _____ ft. level at end of test)

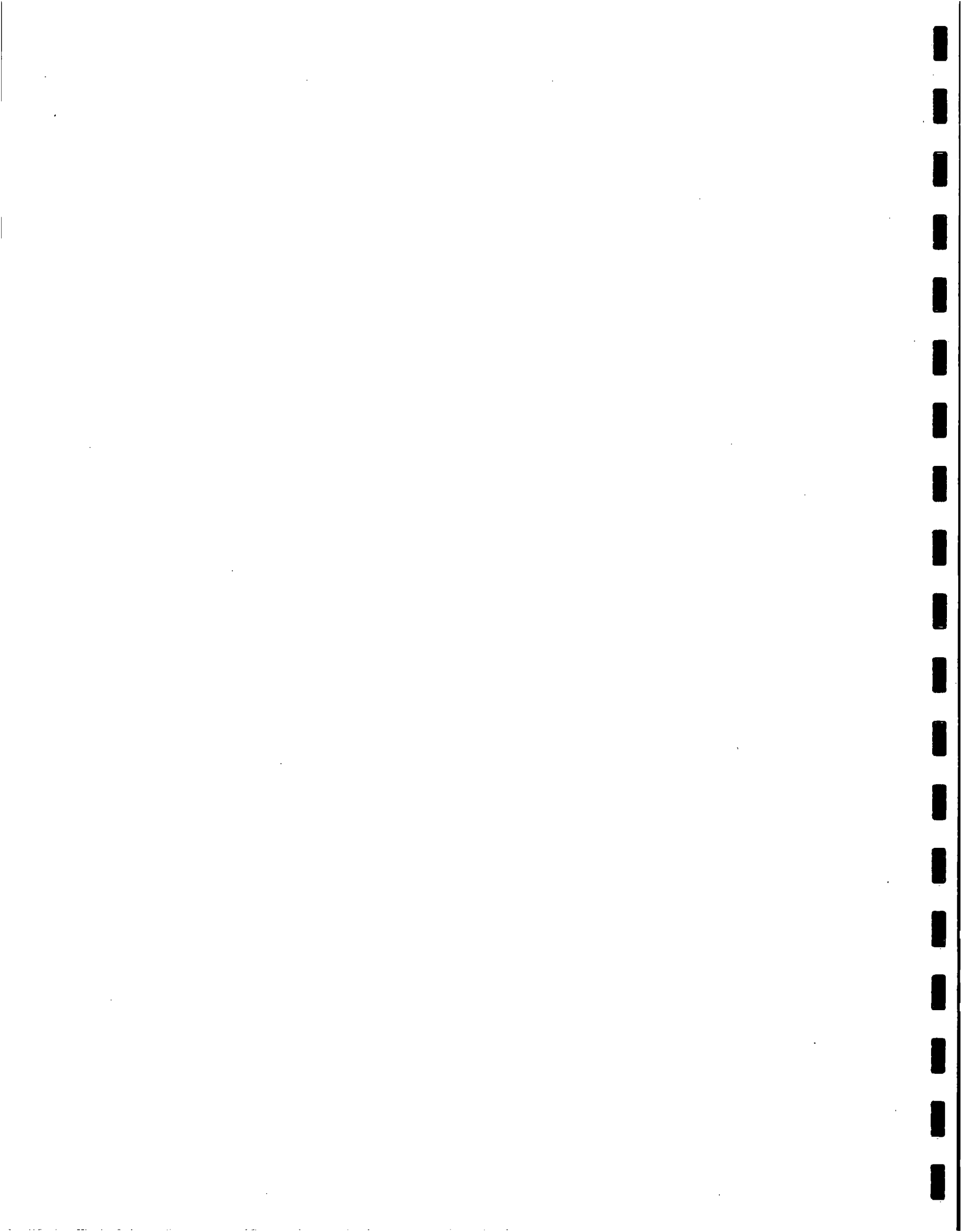
Signature *Barbara Helen Allen*
Date June 27 - 1978

⑦

FOR ADMINISTRATIVE USE ONLY
(Well driller does not fill out)

This Water Well Record form is designed to record the most essential data concerning a water well. We request that you be as accurate as possible in recording this information as may be of great assistance in the planning and development of new water supplies. An accurate location of the well is equally as important as an accurate well log. Please include all information possible in the space provided for well location. As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted within thirty days after the completion of a well to the Division of Water





③

(Well driller does not fill out)

De-identified

12-1968

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元

元



(9)

DIVISION OF WATER
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA
STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46204
Telephone 633-5267 Area Code 317



WATER WELL RECORD

WELL LOCATION

(Fill in completely - Refer to instruction sheet)

County in which well was drilled LADORTE Civil Township MICHIGAN
Driving directions to the well location: Include County Road Names, Numbers, Subdivision Name, lot number, distinctive landmarks, etc.

350' N. OF ORIOLE ROAD AND 400' NW. OF MACHINERY SHED --
APPROXIMATELY 4 BLOCKS SOUTH OF LAKE MICHIGAN.

NAME OF WELL OWNER and/or BUILDING CONTRACTOR

Well Owner LONG BEACH COUNTRY CLUB Address MICHIGAN CITY, INDIANA

Building Contractor — Address —

Name of Well Drilling Contractor: PEERLESS-MIDWEST, INC.

Address GRANGER, INDIANA

Name of Drilling Equipment Operator: PAUL WYATT

WELL INFORMATION

Depth of well: 165' Date well was completed: 3-26-79

Diameter of casing or drive pipe: 12" Total Length: 140'

Diameter of liner (if used): — Total Length: —

Diameter of Screen: 12" Length: 25' Slot Size: .055

Type of Well: Drilled ☐ Gravel Pack ☐ Driven ☐ Other BENTONITE

Use of Well: ☒ For Home ☐ For Industry ☐ For Public Supply ☐ Stock ☐

Method of Drilling: ☒ IRRIGATION Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☐ Bucket Rig ☐ R.C.

Static water level in completed well (Distance from ground to water level) 14" ABOVE grd. feet

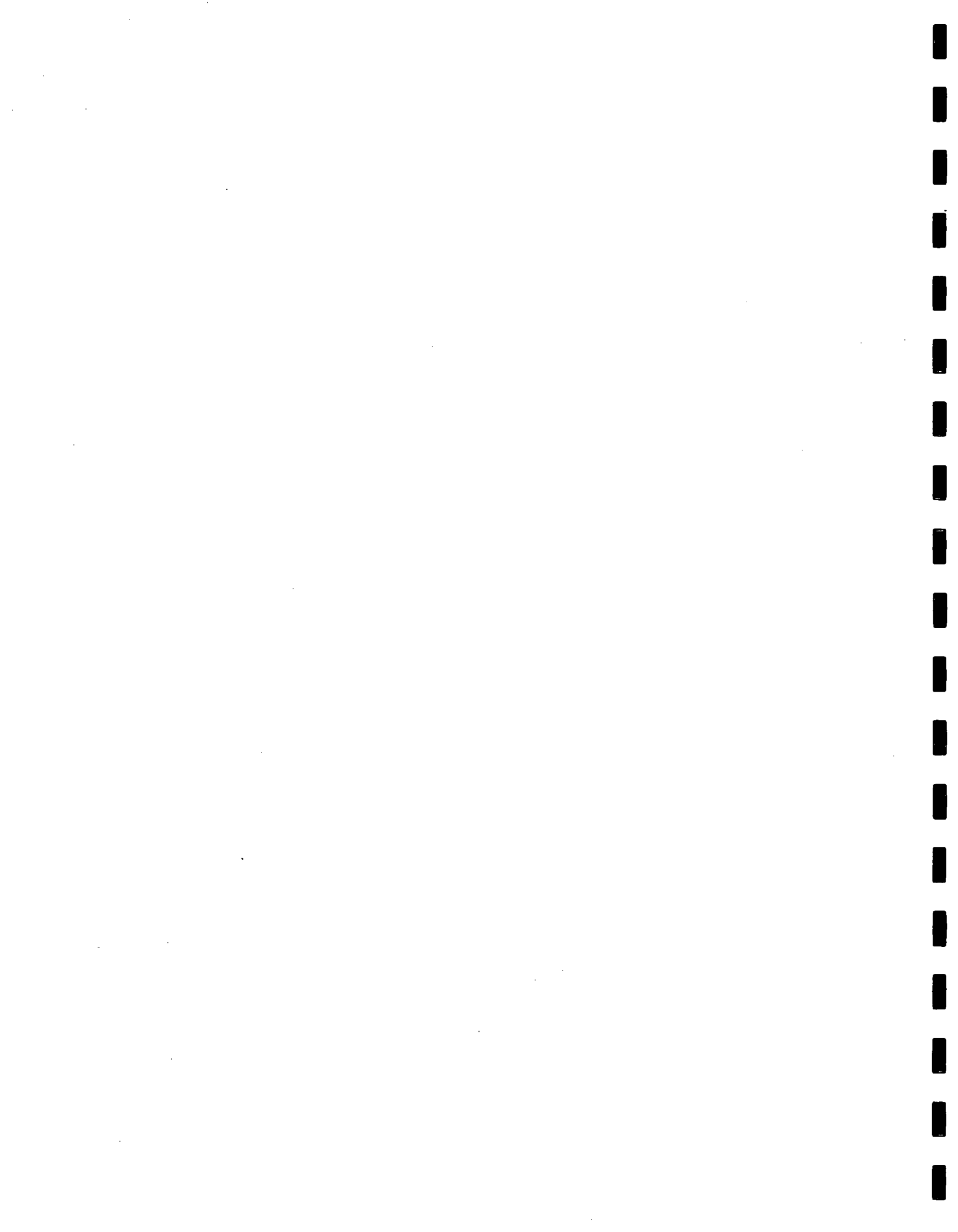
Bailer Test: Hours Tested — Rate — g.p.m. Drawdown — ft.

Pumping Test: Hours Tested 8 Rate 200 g.p.m. Drawdown 121 ft.

(Drawdown is the difference between static level and water level at end of test)

Signature R.J. Williams

Date 3-26-79





PEERLESS-MIDWEST, INC. *Water Supply Contractors*
51255 BITTERSWEET ROAD / GRANGER, INDIANA 46530 / 219 272-9050

April 17, 1979

Indiana Department of Natural Resources
Room 605
State Office Building
Indianapolis, IN 46204

Attention: Mr. Bill Steen
Division of Water

Dear Bill:

We have just completed a well at the Long Beach Country Club near Michigan City, Indiana, which is extremely interesting from a geological standpoint. I pass the enclosed records on to you if yours is the department that concerns itself with this type of phenomenon. If not, please pass it on to Geological Survey or anyone else that might be interested in a rather unique glacial deposit.

This installation is very near the shores of Lake Michigan and through this area, we generally have about 30' of sand cover and then another 20' to 50' of clay before going into solid shale. As you will notice from the enclosed, we apparently got into a channel cut into the shale by a stream coursing off the face of the ice. The cut was to 165' below grade and there was 25' of very coarse gravel at the bottom of it. We attach the analysis from Johnson advising that this is not fractured shale, but actually a gravel deposit of glacial origin.

Normally, we would expect to produce up to 1500 GPM from 25' of this type gravel, however, as you will note in this case the well was only capable of sustaining 200 GPM. This further confirms the fact that we are in a relatively narrow channel cut into the shale. Final confirmation of this comes from the water analysis, which is enclosed. As you will note, hardness is extremely high as are some of the other elements indicating feed into the gravel deposit from the surrounding shale. We also have hydrogen sulfide, which is another clue that the water is coming through the shale into this gravel deposit.

We felt whatever it is worth, we thought this was quite interesting and may add to the overall knowledge of the area.

Very truly yours,

PEERLESS-MIDWEST, INC.

R. J. Williams
RJW/a
Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

WATER ANALYSIS

1W-33

Mich City East 7 E

LOCATION Michigan City (1 mi. E of), Indiana Owner: American Cyanamid Co.

SW 1/4 NE 1/4 Sec 22-T 38N-R1W

SOURCE Drilled well 648' deep, 16"-12" diam., cased to 402', Drilled June 1951.

Sample collected from 580' depth with sampler. WBF: Niagara. WL: 22' above LA.

Yield: 500 GM measured.

DATE OF COLLECTION June 20, 1951 TEMP. (°F) 59

(Parts per million)

Silica (SiO ₂)	<u>7.0</u>	Carbonate (CO ₃)	<u>0</u>
Iron (Fe)	<u>1.8</u>	Bicarbonate (HCO ₃)	<u>390</u>
Manganese (Mn)	<u>-</u>	Sulfate (SO ₄)	<u>1,680</u>
Aluminum (Al)	<u>-</u>	Chloride (Cl)	<u>1,798</u>
Calcium (Ca)	<u>1,002</u>	Iodide (I)	<u>0</u>
Magnesium (Mg)	<u>302</u>	Bromide (Br)	<u>28</u>
Strontium (Sr)	<u>-</u>	Borate (BO ₃)	<u>-</u>
Barium (Ba)	<u>0</u>	Phosphate (PO ₄)	<u>0</u>
Sodium (Na)	<u>1,662</u>		
Potassium (K)	<u>180</u>		

Dissolved solids	<u>8,679</u>	Specific gravity at 20° C	<u>1.005</u>
Total hardness as CaCO ₃		Viscosity at 20° C.	<u>1.01</u>
Color			
pH value	<u>6.7</u>		
Specific conductance at 25° C. (micromhos)	<u>13,010</u>		

W.R. Lab. No. Cal-2997

Field No. 1p-1-1

Laporte County

1W-33

See wells - Disposal
Project -

Green log? in MF





AQUA
ANALYTICAL
ASSOCIATES INC.

WATER ANALYSIS REPORT

9

P.O. Box 218
LaFontaine, IN 46940
Phone: (317)981-2900

Client Peerless-Midwest Inc.

P.O. Box 26

Granger, IN

Date of Analysis April 5, 1979

Date Collected April 3, 1979

Report No. 451

Sampled By Dick Hamilton

Appearance Clear

Sample Source Long Beach Country Club

ANALYSIS

SAR (Sodium Adsorption Ratio)

Specific Conductance

pH

Total Hardness (as CaCO_3)

Alkalinity (as CaCO_3)

Chlorides (Cl)

Calcium (Ca)

Magnesium (Mg) (Calculated)

Carbon Dioxide (CO_2) Laboratory

Chemical - Oxygen Demand (C.O.D.)

Sulfate (SO_4)

Iron (Fe) Total

Dissolved

Manganese High

Low

Ammonia (NH_3) Nessler

Fluoride (F)

Nitrates (NO_3)

Nitrites (NO_2)

Phosphate (PO_4)

Color

Turbidity

Total Suspended Solids

Stability Index

Phenolphthalein Alkalinity (as CaCO_3)

Carbonate (as CaCO_3)

Bicarbonate (as CaCO_3)

Carbonates (CO_3)

Hydroxides (OH)

Bicarbonates (HCO_3)

Silica (SiO_2)

Calcium Hardness (As CaCO_3)

Magnesium Hardness (As MgCO_3)

Sodium (Na)

Saturation Index (Langlier)

pH_s

8.4

5700 umhos

7.3

1632 ppm (mg/liter)

95.4 gr/gal

320

1556 ppm (mg/liter)

304

210 ppm (mg/liter)

210

ppm (mg/liter)

ppm (mg/liter)

785 ppm (mg/liter)

9 ppm (mg/liter)

ppm (mg/liter)

Nil ppm (mg/liter)

ppm (mg/liter)

ppm (mg/liter)

5 ppm (mg/liter)

ppm (mg/liter)

ppm (mg/liter)

pcu

ntv

ppm (mg/liter)

ppm (mg/liter)

ppm (mg/liter)

320 ppm (mg/liter)

ppm (mg/liter)

ppm (mg/liter)

ppm (mg/liter)

390 ppm (mg/liter)

ppm (mg/liter)

760 ppm (mg/liter)

732.5 ppm (mg/liter)

780 ppm (mg/liter)

A. H. ...

WATER WELL LOG

RUE.

 $\frac{y}{2}$

4

SEC

Subdivision Name

-Topo Map_____

Field Located By _____ Date _____

Courthouse Location By _____ Date _____

Location accepted w/o verification by _____

Ft W of EL.

Ground Elevation

 Ft N of SL.

Depth to bedrock

Ft E of WL.

Bedrock elevation

Ft S of NL.

Aquifer elevation

Lot Number _____

[illegible]



FOR ADMINISTRATIVE USE ONLY
(Well driller does not fill out)

Flowing

BR

Long Beach

Country Club

COUNTY La Porte

TWP. 38 N RGE. 4 W

NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW

SEC 14

Subdivision Name

Topo Map Michigan City East 2 1/2

Ft W of EL

Ground Elevation ~620

Peerless

Field Located

By W/E

Date 7/24/74

1100

Ft N of SL

Depth to bedrock 165

3-26-79

Courthouse Location By

Date

1500

Ft E of WL

Bedrock elevation 455

Location accepted w/o verification by

Ft S of NL

Aquifer elevation

Lot Number

Visit to ground surface - Well not drilled - 1500

W W R S

WATER WELL LOG

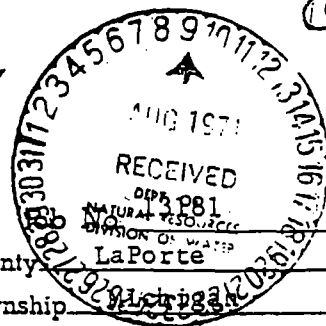
FORMATIONS (Color, type of material, hardness, etc.)



NORTHERN COMPANY

INCORPORATED

INDIANAPOLIS • MISHAWAKA • LANSING



☒ TEST

☐ PERMANENT

WELL LOG No. 1 CITY Michigan City

County LaPorte

Owner Triplex Plating

Township Michigan

Section

Location

State Indiana

From Land Description 50' N. of plant

From Street or Road 15' E. of State Route #12

FORMATION FOUND - DESCRIBE FULLY	FROM NATURAL GROUND LEVEL			
	Depth to Top of Stratum	Depth to Bottom of Stratum	Thickness of Stratum	Static Water Level
Fill	0	1	1	
Dirty Sand * 6'	1	7	6	
Red Sand with clay * 3'	7	10	3	
Brown Dirty Sand * 7'	10	17	10	
Fine Sand (Brown) * 13'	17	30	13	14'
Fine Sand with clay * 2'	30	32	2	14'
Brown Fine Sand * 10'	32	42	10	14
Grey Fine Sand - some silt * 14'	42	56	14	14
Grey Clay	56	66	10	
Drilled 10' in clay to 66'				
Pulled everything out				

Hole 8 "Dia Drilled by: { Cable Tool X Rotary _____ Jetting _____
Reverse Circ. _____ Bucket _____ Auger _____

Rotary Hole Grouted: Neat Cement _____ Drilling Mud _____ Other _____

Casing _____ "OD From _____ "above ground to _____ feet below ground. Weight _____ Pounds per foot

Screen _____ " Set from _____ to _____ feet Make _____ Type _____ Slot _____

Pumping test _____ GPM drawdown to _____ feet after _____ hours pumping

Date Completed 6/25/71 Driller Dick Kent

FOR ADMINISTRATIVE USE ONLY
(Well driller does not fill out)

Subdivision Name:

COUNTY: Leelanau TWP. 38N RGE. 4W NW $\frac{1}{2}$ NW $\frac{1}{2}$ NE $\frac{1}{2}$ SEC. 28

Topo Map: Michigan City West

Field Located By _____ Date _____

Courthouse Location By _____ Date _____

Location accepted w/o verification by Adh 9/71

_____ Ft W of EL. Ground elevation _____

_____ Ft N of SL. Depth to bedrock _____

_____ Ft E of WL. Bedrock elevation _____

_____ Ft S of NL. Aquifer elevation 534-

Lot Number _____

7054 6/6/71

WATER WELL LOG

FORMATIONS (Color, type of material, hardness, etc.)

To

From

MARKS:



11

DIVISION OF WATER
DEPARTMENT OF NATURAL RESOURCES, STATE OF INDIANA
STATE OFFICE BUILDING
INDIANAPOLIS, INDIANA 46204
Telephone 633-5267 Area Code 317

WATER WELL RECORD

73
WELL LOCATION

(Fill in completely - Refer to instruction sheet)

County in which well was drilled LaPorte Civil Township _____
Driving directions to the well location: Include County Road Names, Numbers, Subdivision Name, lot number, distinctive landmarks, etc.
Take Highway 421 to U. S. 12 - Go East on 12 for 2 miles - on right-hand side of road.

NAME OF WELL OWNER and/or BUILDING CONTRACTOR

Well Owner Mel Harlib, Waste, Inc. Address 201 Dyson St., Michigan City, Ind.

Building Contractor _____ Address _____

Name of Well Drilling Contractor: Beach Plumbing & Well Drilling Co.

Address 1272 Horse Prairie Avenue, Valparaiso, Indiana 46383

Name of Drilling Equipment Operator: Dan Kolan

WELL INFORMATION

Depth of well: 35' Date well was completed: 3-20-74

Diameter of casing or drive pipe: 4" Total Length: 30'

Diameter of liner (if used): _____ Total Length: _____

Diameter of Screen: 3" Length: 5' Slot Size: .008

Type of Well: Drilled ☒ Gravel Pack ☐ Driven ☐ Other _____

Use of Well: For Home ☐ For Industry ☒ For Public Supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☒ Rev. Rotary ☐ Jet ☐ Bucket Rig ☐

Static water level in completed well (Distance from ground to water level) 5 feet

Bailer Test: Hours Tested _____ Rate _____ g.p.m. Drawdown _____ ft.

Pumping Test: Hours Tested _____ Rate _____ g.p.m. Drawdown _____ ft.

Plunger Pumped 40 g.p.m.

Signature D. S. Kolan

Date 3-22-74

(Well driller does not fill out),

_____ Ft S of NL. Aquifer elevation 575 Lot Number _____

Fine Sand



(12)

DIVISION OF WATER RESOURCES
INDIANA DEPARTMENT OF CONSERVATION
311 WEST WASHINGTON STREET
INDIANAPOLIS, INDIANA

WATER WELL RECORD

INFORMATION ON WELL LOCATION

County in which well was drilled: La Porte Civil Township: _____

Congressional township: _____ Range: _____ Number of section: _____

(Fill in as completely as possible)

Describe in your own words the well location with respect to nearby towns, roads, streets
or distinctive landmarks: On factory grounds

Name of owner: Triplex Plating Co. Address: Michigan City, Indiana

Name of Well Drilling Contractor: Westville Well Co.

Address: P. O. Box 67, Westville, Indiana

Name of Drilling Equipment Operator: Campbell

INFORMATION ON THE WELL

Completed depth of well: 58 ft. Date well was completed: 8/20/59

Diameter of outside casing or drive pipe: 4" Length: 48'

Diameter of inside casing or liner: _____ Length: _____

Diameter of Screen: 3-7/8 Length: 10 Slot size: 10

Type of Well: Drilled ☒ Gravel Pack ☐ Driven ☐ Other _____

Use of Well: For home ☐ For industry ☒ For public supply ☐ Stock ☐

Method of Drilling: Cable Tools ☐ Rotary ☐ Rev. Rotary ☐ Jet ☒ Driven ☐

Static water level in completed well (Distance from ground to water level) 18' ft.

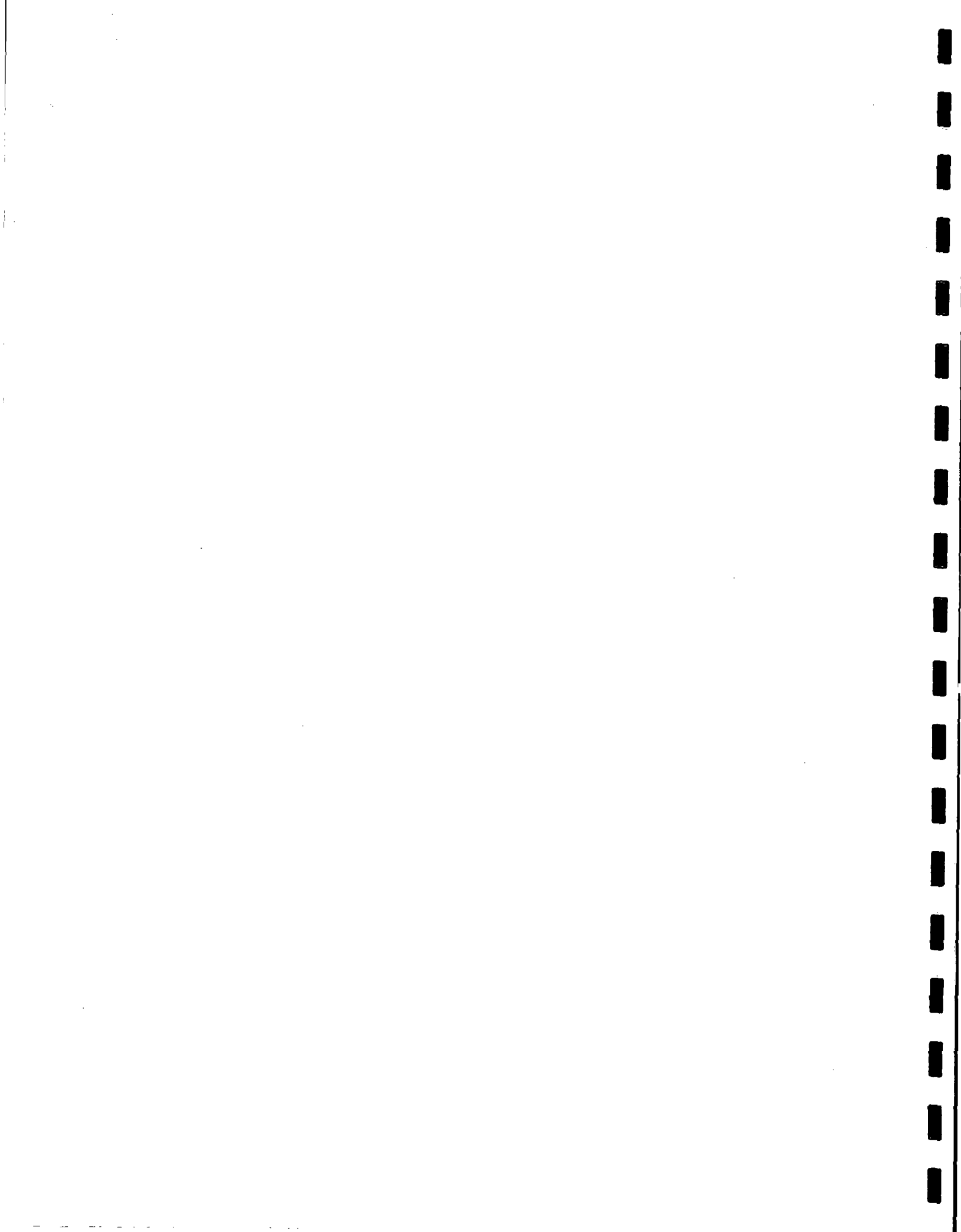
Bailer Test: Hours tested _____ Rate _____ g.p.m. Drawdown _____ ft. (Difference between

Pumping Test: Hours tested _____ Rate _____ g.p.m. Drawdown _____ ft. static level and water
level at end of test)

Signature E. J. [Signature]

Date SEP 17 1959

FOR WELL LOG SPACE USE REVERSE SIDE OF THIS SHEET



12

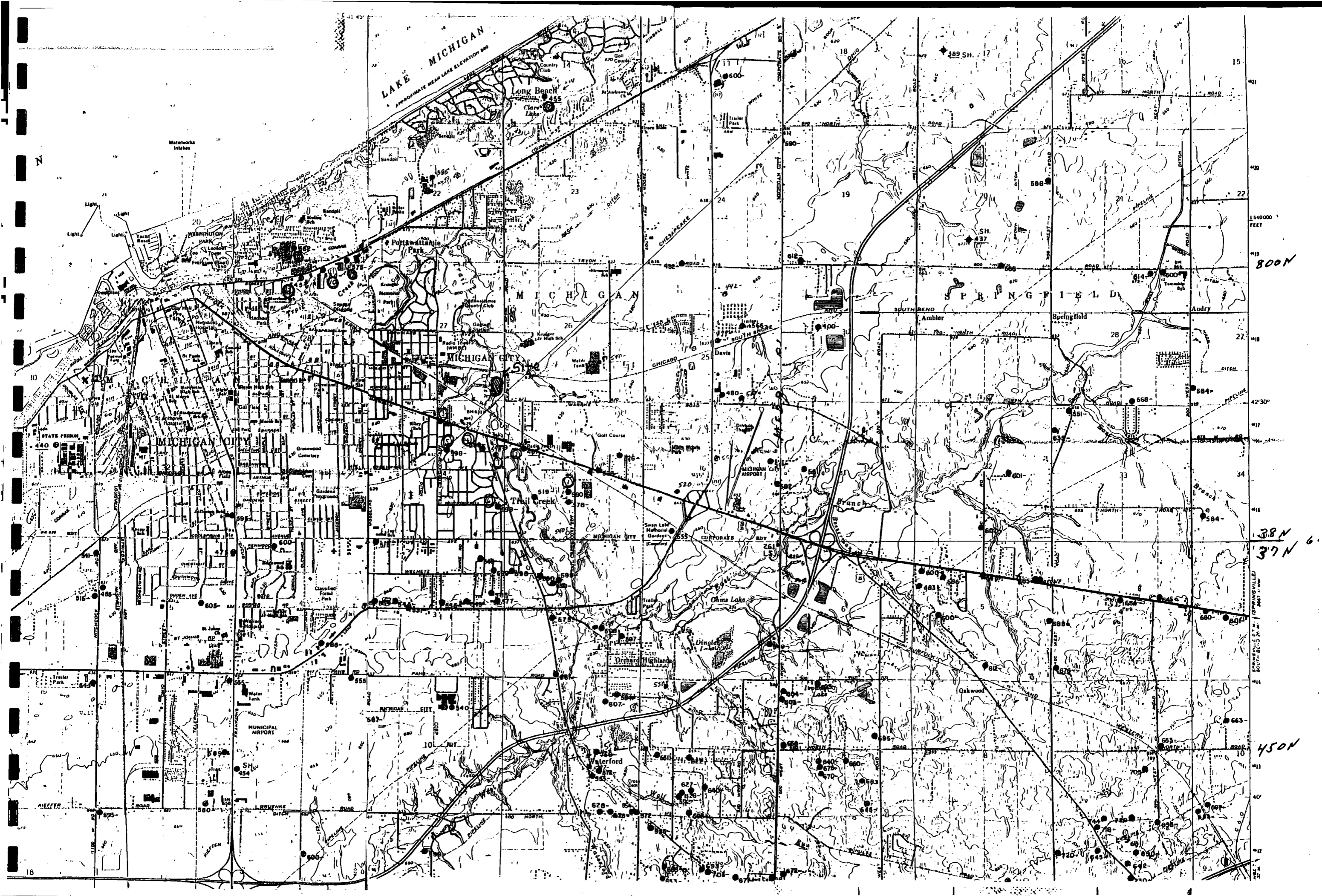
FOR ADMINISTRATIVE USE ONLY
(Well Driller does not fill out)

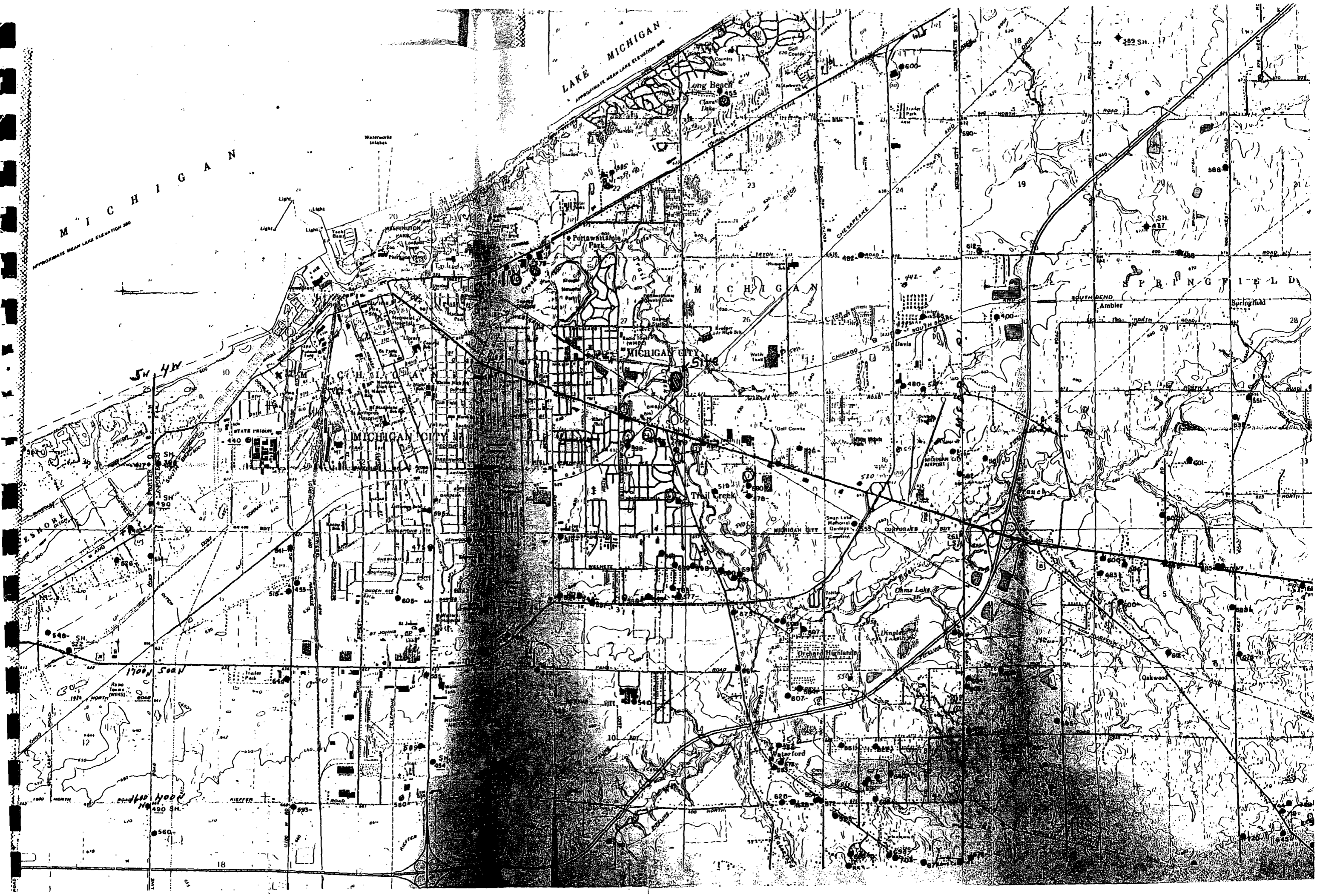
2700
800
S. / north line

100

na. 2

As specified in Chapter 6 of the Acts of 1959, a copy of this report must be submitted within thirty days after the completion of a well to the Division of Water Resources, Indiana Department of Conservation, 311 West Washington Street, Indianapolis, Indiana.







Resent - 6-17-92



MEMORANDUM

State of Indiana • Department of Natural Resources • Indianapolis

TO:

Dana Wize

Site Investigation Section, Ofc of Environmental Response
IDEM
Room 837 Chesapeake Building
105 S. Meridian Street

FROM:

Cloyce L. Hedge *CLH*
Coordinator, Indiana Natural Heritage Data Center

DATE:

3-17-92

SUBJECT: Sensitive Species, etc. - *Michigan City*

I am responding to your request for information on the endangered, threatened, or rare (ETR) species and high quality natural communities and natural areas documented from the area indicated in the subject. The Indiana Natural Heritage Data Center has been checked. If a Land and Water Conservation Fund (LWCF) Site or a Natural and Scenic River is involved, you should contact the Division of Outdoor Recreation, (317)232-4070.



see attached sheet



LWCF Site



no ETR species or
natural areas documented



Designated or candidate
Natural & Scenic River

The information I am providing does not preclude the requirement for further consultation with the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act of 1973. Contact:

U.S. Fish and Wildlife Service
718 North Walnut
Bloomington, Indiana 47401
(812)334-4261

At some point, you may need to contact the Department of Natural Resources' Environmental Review Coordinator so that other divisions within the department have the opportunity to review your proposal. For more information, please contact:

Patrick R. Ralston, Director
Department of Natural Resources
attn: Steve Jose
Environmental Review Coordinator
402 W. Washington Street, Room W271
Indianapolis, IN 46204
(317)232-4070

The Indiana Natural Heritage Data Center relies on the observations of many individuals for our data. In most cases, the information is not the result of comprehensive field surveys conducted at particular sites. Therefore, our statement that there are no documented significant natural features at a site should not be interpreted to mean that the site does not support special plants or animals.

Due to the dynamic nature and sensitivity of the data, this information should not be used for any project other than that for which it was intended. It may be necessary for you to request updated material.

Thank you for contacting the Indiana Natural Heritage Data Center. You may reach me at (317)232-4052 if you have any questions or need additional information.

SENSITIVE SPECIES, ETC.

Michigan City

Species/Feature	*Status	Location
<i>Equisetum variegatum</i>	SE plant	T 38N R 4W S 34
<i>Hypericum kalmianum</i>	SR "	"
<i>Spiranthes lucida</i>	ST "	"
Platanthera <i>Platanthera hyperborea</i>	ST "	"
LWCF site	—	"
<i>Betula papyrifera</i>	SR "	T 38N R 4W S. 25
<i>Lycopodium tristachyum</i>	SE "	"
" <i>hickoryi</i>	SR "	"
<i>Valerianella chloropodifolia</i>	SE "	T 38N R 3W S. 31
<i>Epigaea repens</i>	SR "	T 38N R 3W S. 32
<i>Pyrola rotundifolia</i>	SR "	"
<i>Aschmannia lutea</i>	ST "	"
<i>Stipa aurea</i>	SE "	"
<i>Eriophorum viride-compactum</i>	SR "	T 37N R 4W S. 12
<i>Larix laricina</i>	SSC "	T 37N R 4W S. 2
<i>Sorbus pumila</i>	SSC "	"
<i>Betula populifolia</i>	SX "	"
<i>Clematis guifolia</i>	ST Turtle	"
<i>Cypripedium virginicum</i>	WL plant	"
<i>Carex debilis</i>	ST "	T 38N R 3W S. 19
<i>Poa alodes</i>	ST "	"
<i>Platanthera clavellata</i>	SR "	"
<i>Lycopodium clavatum</i>	SR "	"
<i>Carex scirpoides</i>	ST "	"

*Status: SE - State Endangered
ST - State Threatened
SR - State Rare
SSC - State Special Concern

FE - Federal Endangered
FT - Federal Threatened
FC - Federal Candidate

SX - State Extirpated

Trail
Creek
Fed -
Preserve

SENSITIVE SPECIES, ETC.

Michigan City cont. --

Species/Feature	*Status	Location
Mead Forest Forest	natural community	T 37N R 4W S. 1
Upland		
wet meadow Pholplain Forest	"	"
Milium effusum	ST plant	"
Polygonum conv.	SE	"
Aristida tuberculosa	ST	T 37N R 4W S. 23
Panicum pennsylvanicum	SR	T 37N R 4W S. 13
Aralia nudicaulis	SE	"
Polygonum affine	SE	T 37N R 4W S. 23
Sagittaria arifolia	SE	"
Polygonella nuttalliana	ST	"
stockwell woods Preserve	—	T 37N R 4W S. 22
anyopsis repensfolia	SE	"
Panicum strabus	SSC	"
Aristida strabus wa. wsi	SR	"
Panicum strabus	SR	"
Baker woods Nature Preserve	—	T 37N R 4W S. 4
Boreal Flatwoods	natural community	"
Salix pyramidalis	ST plant	"
Carex acutata	SE	"
" elliptica	SE	"
Asclepias tuberosa	SR	"
" elliptica	SSC	"
Epilobium angustifolium	SR	"
Euphorbia polygonifolia	ST	T 38N R 4W S. 21

*Status: SE - State Endangered
ST - State Threatened
SR - State Rare
SSC - State Special Concern

FE - Federal Endangered
FT - Federal Threatened
FC - Federal Candidate

SENSITIVE SPECIES, ETC.

Arizona City cont. . . .

<u>Species/Feature</u>	<u>*Status</u>	<u>Location</u>
<i>Salsola pennis flava</i>	SSC plant	T38N R4W S.31
<i>Carex olata</i>	SR "	"
<i>Cratogeomys leucogaster</i>	Unlisted "	"
<i>Crotalaria adactyla</i>	ST "	"
<i>Diervilla laevis</i>	SR "	"
<i>Diervilla laevis</i>	ST "	"
<i>Caryx sparganoides</i>	—	T38N R4W S.30
In. Quince Mtl. Lechehorn	—	T38N R4W S.30,31
<i>Arctostaphylos patula</i>	ST "	T38N R4W S.29
<i>Potentilla anserina</i>	SE "	T38N R4W S.21

*Status: SE - State Endangered
 ST - State Threatened
 SR - State Rare
 SSC - State Special Concern

FE - Federal Endangered
 FT - Federal Threatened
 FC - Federal Candidate



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

DATE: August 28, 1992

TO: Dana Reed Wise
Site Investigation Section

THRU:

FROM: Billy E. Giles, Geologist *BSH*
Site Investigation Section *9/3/92*

SUBJECT: Geologic Assessment
Karwick Road Dump
Michigan City, LaPorte County, Indiana

INTRODUCTION

The Karwick Road Dump is located between Karwick Road and Trail Creek just northeast of the intersection of Warnke Road and Karwick Road on the east side of Michigan City, LaPorte County, Indiana. The site is in Section 27, T. 38 N., R. 4 W. The site is in an abandoned landfill.

SOILS

The soils at the Karwick Road Dump are loamy Udorthents, soils that have been disturbed so greatly that the soil type cannot be recognized. The soil survey map indicates that the western portion of the site was probably loamy Fluvaquents and the eastern portion was Oakville fine sand before the area was disturbed.

Udorthents are found on outwash plains, lake plains, till plains, and moraines. In a typical area the surface layer is dark brown or brown sandy loam or loam. The underlying layers are yellowish brown, brownish yellow, brown, and pale brown and include loam, sandy loam, loamy sand, and some sandy clay loam and silty clay loam. In most areas the surface layer and some underlying layers have been removed. In some areas the surface layer has been reworked and mixed with the underlying layer, and in some areas the upper layers are loamy material that has been transported from another site.

Fluvaquents are deep, nearly level, and somewhat poorly drained soils on bottom land. The soil normally has a short, steep slope between it and adjacent, higher lying soils. It is frequently flooded for short periods of time. In a typical area of loamy Fluvaquents the surface layer is dark gray or dark grayish brown loam, silt loam, sandy loam, or loamy sand. The underlying horizons have gray mottles and are stratified layers. The layers are brownish yellow, dark grayish brown, and grayish brown and include loam, sandy loam, loamy sand, sand, and sandy clay loam. The Fluvaquents have moderate available water capacity, a moderate organic matter content and moderate

permeability. Surface runoff is slow. A seasonal high water table is at a depth of 1-3 feet during winter and spring. The surface layer ranges from medium acid to neutral.

The Oakville fine sand is a deep, well drained soil that formed in the fine sands on outwash plains, low sand dunes, and beach ridges. In a typical profile the surface layer is dark yellowish brown fine sand about 8 inches thick. The subsoil is about 25 inches thick. The upper part is yellowish brown, loose fine sand, and the lower part is brownish yellow, loose fine sand. The substratum is very pale brown fine sand. The Oakville soil has low available water capacity and is moderate in organic matter content. Surface runoff is medium or slow. Permeability is very rapid. The hydraulic conductivity is greater than 1.5×10^{-2} cm/sec throughout the profile. The pH ranges from 5.6 to 7.3 throughout the profile.

GEOLOGY

The bedrock surface beneath the Karwick Dump is the Devonian-age Antrim Shale, a hard black shale that overlies a sedimentary sequence about 4000 feet thick. These rocks slope to the northeast at about 11 feet per mile toward the center of the Michigan Basin. These Paleozoic sedimentary rocks rest on a Precambrian complex of mostly igneous rocks.

Overlying the bedrock is between 100 and 150 feet of unconsolidated sediments that contain layers of glacial till, lake sediments, beach deposits, outwash, and alluvium. The glacial till is the dominant layer of sediment in the area according to well logs obtained from the Division of Water, Indiana Department of Natural Resources. It is a hard blue clay till that overlies the bedrock in most well logs and is as much as 75 feet thick in places. Above the till are outwash sands related to the Kankakee Outwash and Lacustrine Plain that is exposed at the surface to the south of the site. These sands were deposited by meltwater from the Lake Erie Lobe of the Wisconsinan glacial advance as it retreated to the northeast. Above the sand is another till unit that is related to the deposits of the Valparaiso Morainal Area that is exposed at the surface south of the site. This till is a silty loam composed of end and ground moraine. The youngest deposits are lacustrine clay and sand units related to the shoreline of glacial Lake Chicago that occupied the Lake Michigan basin during the Pleistocene at a higher level than the current lake. Along the margin of Trail Creek in the western portion of the site are alluvial deposits from flooding of the stream.

HYDROGEOLOGY

Surface-water flow from the Karwick Road Dump is by way of Trail Creek which borders the west side of the site. Trail Creek flows north, then west, then north again, discharging into Lake Michigan at the yacht basin in downtown Michigan City about three miles downstream from the site. Trail Creek flows through residential and commercial areas downstream from the site. The stream is somewhat entrenched as

it flows by the site and ground water from the site probably discharges into the stream channel. Numerous tires and other debris can be seen protruding from the bank indicating the stream is actively eroding and the course of the channel has probably changed over the past few decades.

The permeability of the upper layers of soil and sediments is relatively high due to the high percentage of sand-sized particles at the site. Much of the site consists of fill and altered material which usually increases the permeability of the material. The till deposits below probably form a semipermeable barrier that provides some protection to the major aquifers in the area. Ground water percolating through the sandy surficial sediments probably moves westward toward Trail Creek when the till layer is encountered. According to drillers well logs, most of the wells in the area are completed in the unconsolidated deposits above the bedrock. Some wells are in the unconfined aquifer in the surficial sands. These wells are shallow mostly 20 to 40 feet, and relatively unprotected from surface contamination. Other wells are deeper and are probably completed in the sand and gravel that compose the Kankakee Outwash sediments. These wells are somewhat protected by a semipermeable till layer.

SUMMARY AND RECOMMENDATIONS

The Karwick Road Dump is an abandoned landfill located on the east side of Michigan City adjacent to Trail Creek. The upper layers of soil, sediment, and fill material are relatively coarse-grained and permeable. However, most of the water that infiltrates the surface probably flows horizontally to Trail Creek once it reaches the less permeable till layers.

No visible evidence of hazardous substances is present at the site, thus, sampling may not be warranted. However, if sampling is deemed necessary, staff recommends the collection of soil/sediment samples from the site and surface-water samples from Trail Creek. No residential wells appears to be threatened by the site.

REFERENCES

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Department of Interior, Geological Survey Bulletin No. 13, 183p.

Shaver, Robert H., et al., 1986, Compendium of Paleozoic Rock-Unit Stratigraphy in Indiana - A Revision, Indiana Department of Natural Resources, Geologic Survey Bulletin 59, 203p.



DEPARTMENT OF WATER WORKS

Pure Filtered Water

532 FRANKLIN SQUARE
P.O. BOX 888
MICHIGAN CITY, INDIANA 46360
219/874-3228

MAR 24 8 41 AM '92
OFFICE OF SOLID
AND HAZARDOUS
WASTE
DEPT.

March 19, 1992

Indiana Department of Environmental Mgmt.
ATTN: Ms. Dana Reed Wise
Chesapeake Building
Post Office Box 6015
Indianapolis, Indiana 46206-6016

RE: CERCLIS Site on Karwick Road in LaPorte County, Michigan City,
Indiana.

Dear Ms. Wise:

In response to your letter dated March 13, 1992, with reference to the above stated site, we have enclosed a map showing our approximate service area bounded by the yellow marker.

Also noted on this map are public water mains located in the right-of-way of those streets adjacent to the site, shown in purple.

Further note, we obtain all of our water from Lake Michigan, which is considered a surface water system and that we have no ground water source or wells.

The approximate population of Michigan City is 33,500. This figure does not include the areas of Long Beach, Trail Creek, or Pottawattomie Park. We have a customer base of approximately 11,000 service connections.

We do not keep a record of houses that have there own private well. However, there are a few private homes with wells in the area of the site.

Please feel free to contact our office if any further information is required.

Yours truly,

DEPARTMENT OF WATER WORKS

Randall E. Russell
Superintendent

Enclosure

MICHIGAN CITY

LEGEND

- Schools
- Points of Interest
- Cemeteries
- Parks & Golf Courses
- U.S. Navy
- Swampy Areas
- Railroads
- Streets & Roads

SCALE

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1/2 MILE

3/4 MILE

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APPENDIX C

Environmental Professional's Resume

APT

• Environmental Consultants •

Mishawaka, IN

Andrea M. DePoy

Project Engineer / Project Manager

Ms. DePoy is a degreed Geo-Environmental engineer. Ms. DePoy has training in Phase I and Phase II investigations, UST closures, soil and groundwater sampling, intrinsic bioremediation sampling, monitoring well installation, Oxygen Release Compound (ORC) injections, surveying, and remedial system construction and maintenance. Ms. DePoy has worked on projects in Michigan, Illinois, Iowa, Missouri, Tennessee, Georgia, Pennsylvania, and throughout Indiana. Her responsibilities include: project planning and management, project implementation and maintenance, technical support for soil and groundwater assessments, and providing administrative support for State and Federal agency submittals.

Education:

B.S.E., Geo-Environmental Engineering, Michigan Technological University 1998 (cum laude)

Certifications:

40 hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Certified

8 hour HAZWOPER refresher (1999-2001)

Confined Space Certified (1999)

Missouri Restricted Permit — Monitoring Well Installation

Indiana Certified Asbestos Building Inspector

Registered Indiana Engineering Intern (EIT Passed January 2000)

Project manager for an underground storage tank removal (UST) and site closure at a trucking terminal in northern Illinois. Activities included planning sampling and analysis, preparation of reports, and scheduling of paving activities.

Provided project management for a manufacturing facility entered in the Indiana Voluntary Remediation Program, including oversight of monitoring well installation, geologic characterization, surveying, groundwater sampling, development of potentiometric maps, review of data, scheduling of sampling events, work plan implementation, and preparation of reports.

Project manager of a leaking UST (LUST) site located in northern Illinois under the Tiered Approach to Corrective Action Objectives (TACO) guidelines. Responsibilities included strategy development, planning sampling events, obtaining groundwater use restrictions, groundwater modeling, and preparing final reports.

Task manager for a LUST site in central Indiana to be closed under the Risk-Integrated System of Closure (RISC). Project activities included planning and implementation of field activities, planning closure strategies, and preparing reports and correspondence to state agencies.

Lead geologist for an 80-acre brownfield site in Pennsylvania. Responsibilities include performing Phase II site investigations for the property, inspecting the facility, selecting soil boring and monitoring well locations, advancing and screening soil borings, and installing and sampling monitoring wells.

Lead geologist for site investigation activities at a 72-acre site in Georgia. Responsibilities include performing a site walk-through, performing a Phase II investigation for a property transfer, advancing and screening soil borings, installing and sampling monitoring wells, and preparing the Phase I and Phase II reports.

Lead geologist for Missouri subsurface field activities. Certified to install monitoring wells and soil borings in Missouri. Responsibilities have included performing a Phase II site investigation for a property transfer, performing closure sampling at a major trucking terminal, advancing and screening soil borings, and installing and sampling monitoring wells.

Lead engineer/geologist for several hydraulic conductivity tests (slug testing) in northern Indiana and Pennsylvania including shallow and deep unconfined aquifer testing, confined aquifer testing, and interpretation of results.

Lead engineer/geologist for two small scale herbicide studies. Projects include collecting groundwater and soil samples, collection of water samples from lysimeters and pipe lysimeters, maintaining weather stations and study equipment, maintaining high level QA/QC, operations leader for administrative duties associated with projects.

Employment History:

1998 — Present Advanced Pollution
Technologists, Limited-Engineer

Lead engineer in charge of several reimbursement claims in Indiana and northern Illinois. Responsibilities include preparing applications for reimbursement, preparing reimbursement claim billing packages, and attending meetings with regulatory agencies regarding claim packages.

Lead engineer for operation, maintenance, and performance monitoring of three soils and groundwater systems. Responsibilities included trouble-shooting, routine operation and maintenance, groundwater sampling, and preparation and submittal of National Pollutant Discharge Elimination System (NPDES) Discharge Monitoring Reports and Quarterly Progress Reports to the Indiana Department of Environmental Management (IDEM).

Provided construction management and engineering support for a variety of UST closures and removals. Projects included advancing and screening soil borings for in-place closures, supervising the removal of USTs, preliminary screening, soil and groundwater sampling, preparation of soil disposal approval and notification forms, and preparation and submittal of UST Closure reports.

Field engineer for the installation of air sparging/soil vapor extraction remediation system in northwestern Indiana. The installation included implementation of design specifications, onsite planning, and piping of PVC pipe.

Field geologist for the installation of air sparging and soil vapor extraction wells for a major petroleum release in eastern Michigan. Responsibilities included oversight of well installation at night, screening soils and providing geological descriptions.

Field geologist for a site investigation at a landfill in northwestern Indiana. Responsibilities included the oversight of the advancing of soil borings with a geoprobe, screening soil samples, collecting soil and groundwater samples, project coordination with the USEPA, and installing and sampling monitoring wells.

Provided technical support for various projects being completed under the Indiana Voluntary Remediation Program, including lending assistance in the preparation of site assessment evaluation, gathering of information for remedial evaluation, preparation of groundwater potentiometric maps, preparation of program applications, and periodic groundwater sampling and reporting.

Provided technical support for various remediation projects associated with LUSTs used to store petroleum products. The project responsibilities include providing oversight for impacted soil removal, preparation of site characterization reports, Corrective Action Plans, gathering of data for remedial feasibility analyses, intrinsic bioremediation sampling, and hydraulic conductivity testing.